

CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report/Environmental Impact Statement

FINAL

Merced to Fresno Section
Project EIR/EIS

Volume III:

Section B1 – Alignment Plans

UPRR/SR 99 Alternative with Ave 21 Wye

April 2012



CALIFORNIA
High-Speed Rail Authority





U.S. Department of Transportation
Federal Railroad Administration



| SHT NO. | DWG NO. | DRAWING TITLE LINE 3 | DRAWING TITLE LINE 4 | DRAWING TITLE LINE 5 | DRAWING TITLE LINE 6 |
|---------|---------|--|--|----------------------------------|-----------------------------|
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| | TJ7402A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/ AVENUE 21 | TRACK GEOMETRY DATA | |
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| | | | | | |
| | TJ3401A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TYPICAL SECTION | |
| | TJ3402A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TYPICAL SECTION | |
| | TJ3902 | UPRR/SR 99 MAIN LINE | AVENUE 21 | TYPICAL SECTIONS | SHEET 2 OF 3 |
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| | T3000-A | GENERAL | | TYPICAL SECTION LIMITS | |
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| | T3016-A | | | TYPICAL SECTIONS | SHEET 16 OF 17 |
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| | | | | | |
| | T2086-A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TRACK PLAN AND PROFILE | STA 6152+00 TO STA 6208+00 |
| | T2087-A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TRACK PLAN AND PROFILE | STA 6208+00 TO STA 6264+00 |
| | T2088-A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TRACK PLAN AND PROFILE | STA 6264+00 TO STA 6320+00 |
| | T2089-A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TRACK PLAN AND PROFILE | STA 6320+00 TO STA 6376+00 |
| | T2090-A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TRACK PLAN AND PROFILE | STA 6376+00 TO STA 6432+00 |
| | T2091-A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TRACK PLAN AND PROFILE | STA 6342+00 TO STA 6488+00 |
| | T2092-A | UPRR/SR 99 MAIN LINE | AVENUE 24/SR152/AVENUE 21 | TRACK PLAN AND PROFILE | STA 6488+00 TO STA 6542+00 |
| | | | | | |
| | T2093-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | TRACK PLAN AND PROFILE | STA 6146+00 TO STA 6202+00 |
| | T2094-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | TRACK PLAN AND PROFILE | STA 6202+00 TO STA 6258+00 |
| | T2095-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | TRACK PLAN AND PROFILE | STA 6258+00 TO STA 6314+00 |
| | T2096-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | TRACK PLAN AND PROFILE | STA 6314+00 TO STA 6370+00 |
| | T2097-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | TRACK PLAN AND PROFILE | STA 6370+00 TO STA 6426+00 |
| | T2098-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | TRACK PLAN AND PROFILE | STA 6426+00 TO STA 6482+00 |
| | T2099-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | TRACK PLAN AND PROFILE | STA 6482+00 TO STA 6506+32 |
| | | | | | |
| | T2100-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 270+59.95 TO STA 310+00 |
| | T2101-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 310+00 TO STA 365+00 |
| | T2102-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 365+00 TO STA 420+00 |
| | T2103-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 420+00 TO STA 475+00 |
| | T2104-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 475+00 TO STA 530+00 |
| | T2105-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 530+00 TO STA 585+00 |
| | T2106-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 585+00 TO STA 640+00 |
| | T2107-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 640+00 TO STA 695+00 |
| | T2108-A | UPRR/SR 99 MAIN LINE | AVENUE 21 | PLAN AND PROFILE | STA 695+00 TO STA 750+00 |
| | T2109-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 750+00 TO STA 805+00 |
| | T2110-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 805+00 TO STA 860+00 |
| | T2111-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 860+00 TO STA 915+00 |
| | T2112-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 915+00 TO STA 970+00 |
| | T2113-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 970+00 TO STA 1025+00 |
| | T2114-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1025+00 TO STA 1080+00 |

| SHT NO. | DWG NO. | DRAWING TITLE LINE 3 | DRAWING TITLE LINE 4 | DRAWING TITLE LINE 5 | DRAWING TITLE LINE 6 |
|---------|---------|--------------------------------|-------------------------|-------------------------|-------------------------------|
| | T2115-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1080+00 TO STA 1135+00 |
| | T2116-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1135+00 TO STA 1190+00 |
| | T2117-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1190+00 TO STA 1245+00 |
| | T2118-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1245+00 TO STA 1300+00 |
| | T2119-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1300+00 TO STA 1355+00 |
| | T2120-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1355+00 TO STA 1410+00 |
| | T2121-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1410+00 TO STA 1465+00 |
| | T2122-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1465+00 TO STA 1520+00 |
| | T2123-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1520+00 TO STA 1575+00 |
| | T2124-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1575+00 TO STA 1630+00 |
| | T2125-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1630+00 TO STA 1663+23.96 |
| | T2126-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1713+98 TO STA 1748+00 |
| | T2127-A | UPRR/SR 99 MAIN LINE | | PLAN AND PROFILE | STA 1748+00 TO STA 1801+61.52 |
| | | | | | |
| | T2200-A | UPRR/SR 99 MERCED CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 4586+53.68 TO STA 4640+00 |
| | T2201-A | UPRR/SR 99 MERCED CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 4640+00 TO STA 4695+00 |
| | T2202-A | UPRR/SR 99 MERCED CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 4695+00 TO STA 4750+00 |
| | T2203-A | UPRR/SR 99 MERCED CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 4750+00 TO STA 4805+00 |
| | T2204-A | UPRR/SR 99 MERCED CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 4805+00 TO STA 4860+00 |
| | T2205-A | UPRR/SR 99 MERCED CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 4860+00 TO STA 4915+00 |
| | T2206-A | UPRR/SR 99 MERCED CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 4915+00 TO STA 4970+00 |
| | T2207-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 4970+00 TO STA 5025+00 |
| | T2208-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5025+00 TO STA 5080+00 |
| | T2209-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5080+00 TO STA 5135+00 |
| | T2210-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5135+00 TO STA 5190+00 |
| | T2211-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5190+00 TO STA 5245+00 |
| | T2212-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5245+00 TO STA 5300+00 |
| | T2213-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5300+00 TO STA 5355+00 |
| | T2214-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5355+00 TO STA 5410+00 |
| | T2215-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5410+00 TO STA 5465+00 |
| | T2216-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5465+00 TO STA 5520+00 |
| | T2217-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5520+00 TO STA 5575+00 |
| | T2218-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5575+00 TO STA 5630+00 |
| | T2219-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5630+00 TO STA 5685+00 |
| | T2220-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5685+00 TO STA 5740+00 |
| | T2221-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5740+00 TO STA 5795+00 |
| | T2222-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5795+00 TO STA 5850+00 |
| | T2223-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5850+00 TO STA 5905+00 |
| | T2224-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5905+00 TO STA 5960+00 |
| | T2225-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 5960+00 TO STA 6015+00 |
| | T2226-A | UPRR/SR 99 MERCED CONNECTION | | PLAN AND PROFILE | STA 6015+00 TO STA 6066+14.09 |
| | | | | | |
| | T2250-A | UPRR/SR 99 WYE - NB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 505+00 TO STA 555+00 |
| | T2251-A | UPRR/SR 99 WYE - NB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 555+00 TO STA 610+00 |
| | T2252-A | UPRR/SR 99 WYE - NB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 610+00 TO STA 665+00 |
| | T2253-A | UPRR/SR 99 WYE - NB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 665+00 TO STA 720+00 |
| | T2254-A | UPRR/SR 99 WYE - NB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 720+00 TO STA 775+00 |
| | T2255-A | UPRR/SR 99 WYE - NB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 775+00 TO STA 830+00 |
| | T2256-A | UPRR/SR 99 WYE - NB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 830+00 TO STA 846+93.43 |
| | | | | | |
| | T2260-A | UPRR/SR 99 WYE - SB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 105+00 TO STA 125+00 |
| | T2261-A | UPRR/SR 99 WYE - SB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 125+00 TO STA 180+00 |
| | T2262-A | UPRR/SR 99 WYE - SB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 180+00 TO STA 235+00 |
| | T2263-A | UPRR/SR 99 WYE - SB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 235+00 TO STA 290+00 |
| | T2264-A | UPRR/SR 99 WYE - SB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 290+00 TO STA 345+00 |
| | T2265-A | UPRR/SR 99 WYE - SB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 345+00 TO STA 400+00 |
| | T2266-A | UPRR/SR 99 WYE - SB CONNECTION | AVENUE 21 | PLAN AND PROFILE | STA 400+00 TO STA 416+ |

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| | | | | | | | | | | | |
|-----|------|----|-----|-----|------------------------|---------------------------|--|---|---|---|---------------------------|
| | | | | | | DESIGNED BY A. SHIELDS | RECORD SET 15% DESIGN SUBMITTAL |  Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811 |  <i>CALIFORNIA</i> HIGH-SPEED RAIL AUTHORITY | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 ALIGNMENT AVENUE 21 INDEX OF DRAWINGS SHEET 1 OF 2 | CONTRACT NO. HSR06-007 |
| | | | | | DRAWN BY T. WALTZ | DRAWING NO. TO010-A | | | | | |
| | | | | | CHECKED BY A. BOONE | SCALE NONE | | | | | |
| | | | | | IN CHARGE A. BOONE | SHEET NO. OF ### | | | | | |
| | | | | | DATE 07/27/2011 | | | | | | |
| REV | DATE | BY | CHK | APP | DESCRIPTION | | | | | | |

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ABBREVIATIONS

ALIGNMENT

| HORIZONTAL | |
|------------|--|
| BC | BEGINNING OF CURVE |
| CS | CURVE TO SPIRAL |
| EC | END OF CURVE |
| PC | POINT OF CURVE |
| PCC | POINT OF COMPOUND CIRCULAR CURVES |
| PCS | POINT OF CURVE TO SPIRAL |
| PF | POINT OF FROG |
| PI | POINT OF INTERSECTION OF TWO TANGENTS |
| PITO | POINT OF INTERSECTION OF TURNOUT |
| POC | POINT ON CURVE |
| POS | POINT ON SPIRAL |
| POT | POINT ON TANGENT |
| PRC | POINT OF REVERSE CURVES |
| PS | POINT OF SWITCH |
| PSC | POINT OF SPIRAL TO CURVE |
| PT | POINT OF TANGENCY |
| R | RADIUS OF CURVATURE IN FEET |
| SC | SPIRAL TO CURVE |
| SPO | POINT OF ORIGIN OF COMPOUND SPIRAL |
| SS | POINT OF SPIRAL TO SPIRAL |
| ST | SPIRAL TO TANGENT |
| TS | TANGENT TO SPIRAL |
| V | DESIGN VELOCITY IN MILES PER HOUR |
| VERTICAL | |
| PVC | POINT OF VERTICAL CURVE (BEGINNING OF CURVE) |
| PVI | POINT OF VERTICAL INTERSECTION (OF TANGENTS) |
| PVT | POINT OF VERTICAL TANGENCY (ENDING OF CURVE) |
| VC | VERTICAL CURVE |

MISCELLANEOUS

| | |
|----------|--------------------------|
| BEG | BEGIN |
| BLVD | BOULEVARD |
| CL | CENTER LINE |
| CLR | CENTERLINE, CLASS |
| CLR | CLEAR |
| COL | COLUMN |
| DWG | DRAWING |
| EQ | EQUATION |
| EXIST(E) | EXISTING |
| IN | INCH |
| LT | LEFT |
| MAX | MAXIMUM |
| MIN | MINIMUM |
| N | NORTH |
| NB | NORTH BOUND |
| NTS | NOT TO SCALE |
| OG | ORIGINAL GROUND |
| O/H OH | OVER HEAD |
| PG&E | PACIFIC GAS & ELECTRIC |
| PGL | PROFILE GRADE LINE |
| RR | RAILROAD |
| RD | ROAD |
| R/W ROW | RIGHT OF WAY |
| RT | RIGHT |
| SS | SANITARY SEWER |
| SHT | SHEET |
| ST | STREET |
| STD | STANDARD |
| SD | STORM DRAIN |
| STRUCT | STRUCTURE |
| T | TELEPHONE |
| | (OH) OVERHEAD LINE |
| | (UG) UNDERGROUND LINE |
| TOR | TOP OF RAIL |
| TK | TRACK |
| TO | TURNOUT |
| TYP | TYPICAL |
| TBD | TO BE DETERMINED |
| TF | TELECOMMUNICATIONS FIBER |
| | OPTIC |
| V VERT | VERTICAL |
| W | WATER, WEST |

SYMBOLS

| | |
|--|------------------------------------|
| | MATCH LINE |
| | HST TRACK |
| | PROPOSED HST RIGHT-OF-WAY |
| | FREIGHT/PASSENGER TRACK - EXISTING |
| | EXISTING RIGHT-OF-WAY |
| | EXISTING BRIDGE FEATURES |
| | RETAINING WALLS |
| | ORIGINAL GROUND |
| | GAS LINE (16") |
| | COMMUNICATION LINE |
| | WATER LINE |
| | FIBER OPTIC LINE |
| | ELECTRICAL LINE |
| | ELECTRICAL TOWER |
| | SEWER LINE |
| | STORM DRAIN LINE |
| | FUEL LINE |
| | TELEPHONE LINE |
| | PETROLEUM LINE (12") |
| | OVERHEAD |
| | NORTH ARRROW |
| | PVI |
| | POTENTIAL SOUND BARRIER |

NOTES:

- EXISTING ROADS TO BE GRADE SEPARATED OVER THE HIGH SPEED TRAIN (HST) RIGHT OF WAY ARE INDICATED IN THE ALIGNMENT PROFILE. ALL OTHER ROADS CROSSING THE PROPOSED HST TRACKS WILL BE CLOSED OR RELOCATED. SEE ROADWAY PLANS FOR ADDITIONAL INFORMATION.
- SEE STRUCTURE PLANS FOR LIMITS AND DETAILS OF VIADUCTS, STREAM CROSSINGS, RETAINING WALLS AND OTHER HST STRUCTURES.
- SEE ROADWAY PLANS FOR ROADWAY RELOCATIONS, GRADE SEPARATIONS, AND MODIFICATIONS TO STATE HIGHWAY FACILITIES.
- UTILITIES INDICATED ON THE PLANS ARE FOR REFERENCE ONLY. SEE "UTILITIES CONFLICT MEMO" FOR ADDITIONAL INFORMATION AND PROPOSED RELOCATION CONCEPTS.
- ROAD/LOCAL ACCESS DELINEATED FOR FURTHER EVALUATION. ADDITIONAL STUDIES WILL BE CONDUCTED DURING PRELIMINARY ENGINEERING PHASE (30% DESIGN) TO SUBSTANTIATE ITS INCLUSION OR EXCLUSION FROM THE PROPOSED IMPORVEMENTS.
- STANDALONE RADIO SITES WILL BE PROVIDED IN BETWEEN TRACTION POWER FACILITIES (SUBSTATIONS, SWITCHING STATIONS, AND PARALLELING STATIONS). SPACING OF THESE SITES WILL VARY BETWEEN 1-1/2 AND 3 MILES. ACCESS TO THESE SITES WILL BE PROVIDED AT THE NEAREST PUBLIC ROAD THAT CROSSES THE HIGH SPEED TRAIN ALIGNMENT.

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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|-----|------|----|-----|-----|-------------|
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| | | | | | |
| | | | | | |
| | | | | | |
| REV | DATE | BY | CHK | APP | DESCRIPTION |

| |
|---------------------------|
| DESIGNED BY B. CHAN |
| DRAWN BY S. LEONG |
| CHECKED BY A. BOWE |
| IN CHARGE J. VALSECCHI |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



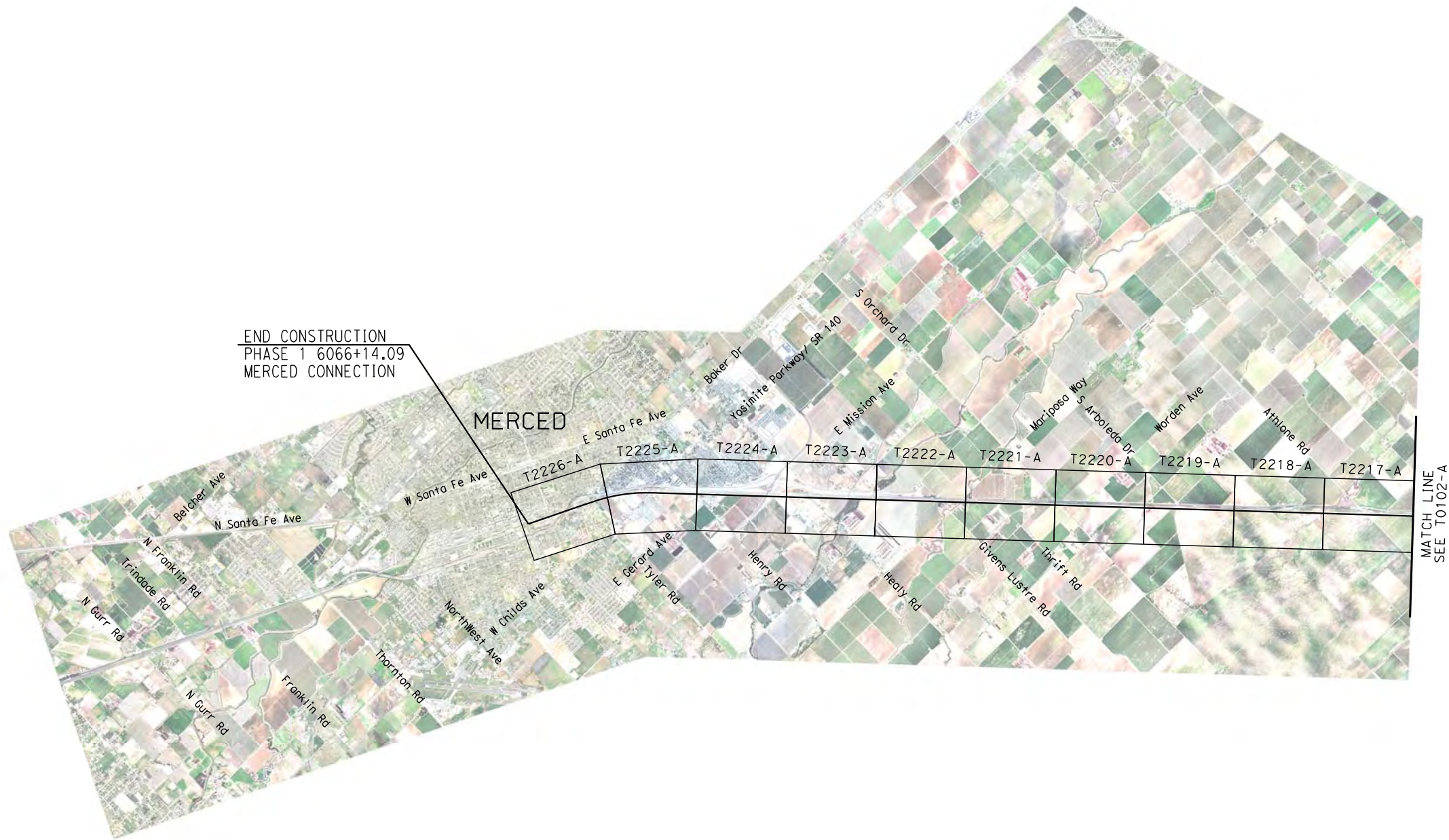
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
GENERAL

ABBREVIATIONS, SYMBOLS AND NOTES

| |
|---------------------------|
| CONTRACT NO. HSR06-007 |
| DRAWING NO. T0100-A |
| SCALE NO SCALE |
| SHEET NO. ### OF ### |

1/9/2012 10:01:00 AM \\usscrlfp001\Cadd\CHSR\60022962\Task-03_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\UPRR AVE 21\WF-T-0101-A.dgn



MATCH LINE
SEE T0102-A

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------------|----|-----|-----|-------------------|
| 1 | 12/12/2011 | AS | | | TRACK REALIGNMENT |

| |
|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 ALIGNMENT
AVENUE 21
KEY MAP
SHEET 1 OF 3

| |
|---------------------------|
| CONTRACT NO. HSR06-007 |
| DRAWING NO. T0101-A |
| SCALE NO SCALE |
| SHEET NO. ### OF ### |

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"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------------|----|-----|-----|-------------------|
| 1 | 12/12/2011 | AS | | | TRACK REALIGNMENT |

DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 ALIGNMENT
AVENUE 21
KEY MAP
SHEET 2 OF 3

CONTRACT NO.
HSR06-007
DRAWING NO.
T0102-A
SCALE
NO SCALE
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shieldsa



"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------------|----|-----|-----|-------------------|
| 1 | 12/12/2011 | AS | | | TRACK REALIGNMENT |

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 ALIGNMENT
AVENUE 21
KEY MAP
SHEET 3 OF 3

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T0103-A |
| SCALE NO SCALE |
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P0037225 7/2

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| DESIGNED BY | P. JACOBY |
| DRAWN BY | ALBERT S. |
| CHECKED BY | RESHMA C. |
| IN CHARGE | D. WEMMER |
| DATE | 4/15/2011 |



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| CONTRACT NO. | HSR08-05 |
| DRAWING NO. | TJ7401A |
| SCALE | NO SCALE |
| SHEET NO. | |

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P0037225

TRACK ALIGNMENT DATA SUMMARY TABLE - SOUTHBOUND TRACK

| CURVE | ELEMENT | POINT TYPE | STATION | COORDINATES | | RADIUS (FT) | LENGTH (FT) | DELTA, Δ | K | P | DESIGN SPEED (MPH) | ACTUAL SUPERELEVATION (EA)(IN) | UNBALANCED SUPERELEVATION (EA)(IN) | WCB (0°00'00") (TANGENT) | WCB (0°00'00") | |
|---------|----------|------------|------------|-------------|------------|-------------|-------------|-----------|--------|------|--------------------|--------------------------------|------------------------------------|--------------------------|----------------|---------------|
| | | | | NORTHING | EASTING | | | | | | | | | | START ANGLE | END ANGLE |
| SR-4-SB | CLOTHOID | TS | 6323+90.04 | 1847153.54 | 6606212.88 | | | | | | | | | | | |
| | CLOTHOID | SPI | 6334+90.06 | 1846684.64 | 6607207.95 | | 1650.00 | 1°03'00" | 824.99 | 2.52 | | | | | S 64°46'07" E | S 65°49'08" E |
| | CLOTHOID | SC | 6340+40.04 | 1846459.33 | 6607709.7 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | ARC | SC | 6340+40.04 | 1846459.33 | 6607709.7 | | | | | | | | | | | |
| | ARC | PI | 6434+27.70 | 1842613.92 | 6616273.64 | 45016.50 | 18510.04 | 23°33'33" | | | 250 | 4.00 | 1.55 | | S 65°49'08" E | S 89°22'40" E |
| | ARC | CC | | 1887525.83 | 6626149.55 | | | | | | | | | | | |
| | ARC | CS | 6525+50.08 | 1842511.99 | 6625660.74 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | CLOTHOID | CS | 6525+50.08 | 1842511.99 | 6625660.74 | | | | | | | | | | | |
| | CLOTHOID | SPI | 6531+00.10 | 1842506.01 | 6626210.73 | | 1650.00 | 1°03'00" | 824.99 | 2.52 | | | | | S 89°22'40" E | N 89°34'20" E |
| | CLOTHOID | ST | 6542+00.08 | 1842514.23 | 6627310.72 | | | | | | | | | | | |

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| REV | DATE | BY | CHK | APP | DESCRIPTION | |

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| DESIGNED BY P. JACOBY |
| DRAWN BY ALBERT S. |
| CHECKED BY RESHMA C. |
| IN CHARGE D. WEMMER |
| DATE 4/15/2011 |

15% DRAFT
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FOR INTERNAL
USE ONLY

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CONSTRUCTION



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TRACK GEOMETRY DATA

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| CONTRACT NO. HSR08-05 |
| DRAWING NO. TJ7402A |
| SCALE NO SCALE |
| SHEET NO. |

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P0037225 7/2

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| DESIGNED BY | P. JACOBY |
| DRAWN BY | ALBERT S. |
| CHECKED BY | RESHMA C. |
| IN CHARGE | D. WEMMER |
| DATE | 4/15/2011 |



CONTRACT NO.
HSR08-05

DRAWING NO.
TJ7403A

SCALE
NO SCALE

SHEET NO.

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P0037225

TRACK ALIGNMENT DATA SUMMARY TABLE - NORTHBOUND TRACK

| CURVE | ELEMENT | POINT TYPE | STATION | COORDINATES | | RADIUS (FT) | LENGTH (FT) | DELTA, Δ | K | P | DESIGN SPEED (MPH) | ACTUAL SUPERELEVATION (EA)(IN) | UNBALANCED SUPERELEVATION (EA)(IN) | WCB (0°00'00") (TANGENT) | WCB (0°00'00") | |
|---------|----------|------------|------------|-------------|------------|-------------|-------------|-----------|--------|------|--------------------|--------------------------------|------------------------------------|--------------------------|----------------|---------------|
| | | | | NORTHING | EASTING | | | | | | | | | | START ANGLE | END ANGLE |
| SR-4-NB | CLOTHOID | TS | 6323+97.39 | 1847168.41 | 6606220.04 | | | | | | | | | | | |
| | CLOTHOID | SPI | 6334+97.21 | 1846699.58 | 6607214.94 | | 1649.70 | 1°03'01" | 824.84 | 2.52 | | | | | S 64°46'07" E | S 65°49'08" E |
| | CLOTHOID | SC | 6340+47.09 | 1846474.32 | 6607716.6 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | ARC | SC | 6340+47.09 | 1846474.32 | 6607716.6 | | | | | | | | | | | |
| | ARC | PI | 6434+31.15 | 1842630.41 | 6616277.26 | 45000.00 | 18502.95 | 23°33'31" | | | 250 | 4.00 | 1.56 | | S 65°49'08" E | S 89°22'40" E |
| | ARC | CC | | 1887525.83 | 6626149.55 | | | | | | | | | | | |
| | ARC | CS | 6525+50.04 | 1842528.49 | 6625660.77 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | CLOTHOID | CS | 6525+50.04 | 1842528.49 | 6625660.77 | | | | | | | | | | | |
| | CLOTHOID | SPI | 6530+99.96 | 1842522.51 | 6626210.65 | | 1649.70 | 1°03'01" | 824.84 | 2.52 | | | | | S 89°22'40" E | N 89°34'20" E |
| | CLOTHOID | ST | 6541+99.74 | 1842530.73 | 6627310.44 | | | | | | | | | | | |

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| REV | DATE | BY | CHK | APP | DESCRIPTION | |

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| DESIGNED BY P. JACOBY |
| DRAWN BY ALBERT S. |
| CHECKED BY RESHMA C. |
| IN CHARGE D. WEMMER |
| DATE 4/15/2011 |

15% DRAFT
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TRACK GEOMETRY DATA

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|--------------------------|
| CONTRACT NO. HSR08-05 |
| DRAWING NO. TJ7404A |
| SCALE NO SCALE |
| SHEET NO. |

TRACK ALIGNMENT DATA SUMMARY TABLE - SOUTHBOUND TRACK

| CURVE | ELEMENT | POINT TYPE | STATION | COORDINATES | | RADIUS (FT) | LENGTH (FT) | DELTA, Δ | K | P | DESIGN SPEED (MPH) | ACTUAL SUPERELEVATION (EA)(IN) | UNBALANCED SUPERELEVATION (EA)(IN) | WCB (0°00'00") (TANGENT) | WCB (0°00'00") | |
|--------|----------|------------|--------------|-------------|------------|-------------|-------------|----------|-----|------|--------------------|--------------------------------|------------------------------------|--------------------------|----------------|---------------|
| | | | | NORTHING | EASTING | | | | | | | | | | START | END |
| | TANGENT | ST | A 6085+46.45 | 1842427.27 | 6581100.50 | | 16,264.68 | | | | | | | S 89°45'06" E | | |
| | TANGENT | TS | A 6248+11.13 | 1842356.80 | 6597365.02 | | | | | | | | | | | |
| V21-8 | CLOTHOID | TS | A 6248+11.13 | 1842356.80 | 6597365.02 | | | 0°06'46" | | | | | | | S 89°45'06" E | |
| | CLOTHOID | SPI | A 6252+57.79 | 1842354.87 | 6597811.69 | | 670.00 | | 335 | 0.11 | | | | | | S 89°51'53" E |
| | CLOTHOID | SC | A 6254+81.13 | 1842354.34 | 6598035.02 | | | | | | | | | | | |
| | ARC | SC | A 6254+81.13 | 1842354.34 | 6598035.02 | | | 0°14'53" | | | | | | | S 89°51'53" E | |
| | ARC | PI | A 6258+49.28 | 1842353.47 | 6598403.17 | 170,000.00 | 736.31 | | | | 250 | 1.00 | 0.47 | | | N 89°53'14" E |
| | ARC | CC | | 2012353.87 | 6598436.51 | | | | | | | | | | | |
| | ARC | CS | A 6262+17.43 | 1842354.20 | 6598771.32 | | | | | | | | | | | |
| | CLOTHOID | CS | A 6262+17.43 | 1842354.20 | 6598771.32 | | | 0°06'46" | | | | | | | N 89°53'14" E | |
| | CLOTHOID | SPI | A 6264+40.77 | 1842354.64 | 6598994.66 | | 670.00 | | 335 | 0.11 | | | | | | N 89°46'27" E |
| | CLOTHOID | ST | A 6268+87.43 | 1842356.40 | 6599441.32 | | | | | | | | | | | |
| | TANGENT | ST | A 6268+87.43 | 1842356.40 | 6599441.32 | | 12,106.35 | | | | | | | N 89°46'27" E | | |
| | TANGENT | TS | A 6389+93.79 | 1842404.10 | 6611547.58 | | | | | | | | | | | |
| V21-9 | CLOTHOID | TS | A 6389+93.79 | 1842404.10 | 6611547.58 | | | 0°02'53" | | | | | | | N 89°46'27" E | |
| | CLOTHOID | SPI | A 6394+40.45 | 1842405.86 | 6611994.24 | | 670.00 | | 335 | 0.05 | | | | | | N 89°43'35" E |
| | CLOTHOID | SC | A 6396+63.79 | 1842406.92 | 6612217.57 | | | | | | | | | | | |
| | ARC | SC | A 6396+63.79 | 1842406.92 | 6612217.57 | | | 0°07'59" | | | | | | | N 89°43'35" E | |
| | ARC | PI | A 6401+27.95 | 1842409.14 | 6612681.73 | 400,000.00 | 928.33 | | | | 250 | 0.50 | 0.13 | | | N 89°35'36" E |
| | ARC | CC | | 2242402.36 | 6610306.54 | | | | | | | | | | | |
| | ARC | CS | A 6405+92.12 | 1842412.43 | 6613145.89 | | | | | | | | | | | |
| | CLOTHOID | CS | A 6405+92.12 | 1842412.43 | 6613145.89 | | | 0°02'53" | 335 | | | | | | N 89°35'36" E | |
| | CLOTHOID | SPI | A 6408+15.45 | 1842414.02 | 6613369.22 | | 670.00 | | | 0.05 | | | | | | N 89°32'43" E |
| | CLOTHOID | ST | A 6412+62.12 | 1842417.56 | 6613815.87 | | | | | | | | | | | |
| | TANGENT | ST | A 6412+62.12 | 1842417.56 | 6613815.87 | | 6,891.32 | | | | | | | N 89°32'43" E | | |
| | TANGENT | TS | A 6481+53.44 | 1842472.25 | 6620706.97 | | | | | | | | | | | |
| | | | | | | | | 0°04'36" | | | | | | | N 89°32'43" E | |
| V21-10 | CLOTHOID | TS | A 6481+53.44 | 1842472.25 | 6620706.97 | | | | 335 | | | | | | | |
| | CLOTHOID | SPI | A 6486+00.11 | 1842475.80 | 6621153.63 | | 670.00 | | | 0.07 | | | | | | N 89°37'19" E |
| | CLOTHOID | SC | A 6488+23.44 | 1842477.27 | 6621376.96 | | | | | | | | | | | |
| | | | | | | | | 0°00'10" | | | | | | | N 89°37'19" E | |
| | ARC | SC | A 6488+23.44 | 1842477.27 | 6621376.96 | 250,000.00 | | | | | | | | | | |
| | ARC | PI | A 6488+29.38 | 1842477.31 | 6621382.90 | | 11.89 | | | | 250 | 0.25 | 0.25 | | | N 89°37'29" E |
| | ARC | CC | | 1592482.71 | 6623025.93 | | | | | | | | | | | |
| | ARC | CS | A 6488+35.33 | 1842477.35 | 6621388.84 | | | | | | | | | | | |
| | | | | | | | | 0°04'36" | | | | | | | N 89°37'29" E | |
| | CLOTHOID | CS | A 6488+35.33 | 1842477.35 | 6621388.84 | | | | 335 | | | | | | | |
| | CLOTHOID | SPI | A 6490+58.66 | 1842478.81 | 6621612.17 | | 670.00 | | | 0.07 | | | | | | N 89°42'06" E |
| | CLOTHOID | ST | A 6495+05.33 | 1842481.14 | 6622058.83 | | | | | | | | | | | |
| | TANGENT | ST | A 6495+05.33 | 1842481.14 | 6622058.83 | | 1,126.57 | | | | | | | N 89°42'06" E | | |
| | TANGENT | POE | A 6506+31.89 | 1842487.01 | 6623185.38 | | | | | | | | | | | |

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| REV | DATE | BY | CHK | APP | DESCRIPTION |

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| DESIGNED BY A. GURA |
| DRAWN BY J. PAZ |
| CHECKED BY S. GOOLLA |
| IN CHARGE D. WEMMER |
| DATE 4/15/2011 |

15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY



NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
TRACK GEOMERTY DATA

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| CONTRACT NO. HSR08-05 |
| DRAWING NO. TJ7903 |
| SCALE NO SCALE |
| SHEET NO. |

| TRACK ALIGNMENT DATA SUMMARY TABLE - NORTHBOUND TRACK | | | | | | | | | | | | | | | | |
|---|----------|------------|------------|-------------|------------|-------------|-------------|----------|--------|------|--------------------|--------------------------------|------------------------------------|--------------------------|----------------|---------------|
| CURVE | ELEMENT | POINT TYPE | STATION | COORDINATES | | RADIUS (FT) | LENGTH (FT) | DELTA, Δ | K | P | DESIGN SPEED (MPH) | ACTUAL SUPERELEVATION (EA)(IN) | UNBALANCED SUPERELEVATION (EA)(IN) | WCB (0°00'00") (TANGENT) | WCB (0°00'00") | |
| | | | | NORTHING | EASTING | | | | | | | | | | START ANGLE | END ANGLE |
| | TANGENT | ST | 6073+74.12 | 1842443.77 | 6581100.58 | | 16,264.69 | | | | | | | S 89°45'06" E | | |
| | TANGENT | TS | 6236+38.81 | 1842373.30 | 6597365.11 | | | | | | | | | | | |
| V21-8 | CLOTHOID | TS | 6236+38.81 | 1842373.30 | 6597365.11 | | | | | | | | | | | |
| | CLOTHOID | SPI | 6240+85.45 | 1842371.37 | 6597811.75 | | 669.97 | 0°06'46" | 334.98 | 0.11 | | | | | S 89°45'06" E | S 89°51'53" E |
| | CLOTHOID | SC | 6243+08.78 | 1842370.84 | 6598035.07 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | ARC | SC | 6243+08.78 | 1842370.84 | 6598035.07 | | | | | | | | | | | |
| | ARC | PI | 6246+76.88 | 1842369.97 | 6598403.17 | 169,983.50 | 736.20 | 0°14'53" | | | 250 | 1.00 | 0.47 | | S 89°51'53" E | N 89°53'14" E |
| | ARC | CC | | 2012353.87 | 6598436.51 | | | | | | | | | | | |
| | ARC | CS | 6250+44.98 | 1842370.70 | 6598771.28 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | CLOTHOID | CS | 6250+44.98 | 1842370.70 | 6598771.28 | | | | | | | | | | | |
| V21-9 | CLOTHOID | SPI | 6252+68.30 | 1842371.14 | 6598994.60 | | 669.97 | 0°06'46" | 334.98 | 0.11 | | | | | N 89°53'14" E | N 89°46'27" E |
| | CLOTHOID | ST | 6257+14.95 | 1842372.90 | 6599441.24 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | TANGENT | ST | 6257+14.95 | 1842372.90 | 6599441.24 | | 12,106.38 | | | | | | | N 89°46'27" E | | |
| | TANGENT | TS | 6378+21.32 | 1842420.60 | 6611547.52 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | CLOTHOID | TS | 6378+21.32 | 1842420.60 | 6611547.52 | | | | | | | | | | | |
| | CLOTHOID | SPI | 6382+67.98 | 1842422.36 | 6611994.17 | | 669.99 | 0°02'53" | 334.99 | 0.05 | | | | | N 89°46'27" E | N 89°43'35" E |
| | CLOTHOID | SC | 6384+91.31 | 1842423.42 | 6612217.50 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| V21-10 | ARC | SC | 6384+91.31 | 1842423.42 | 6612217.50 | | | | | | | | | | | |
| | ARC | PI | 6389+55.45 | 1842425.64 | 6612681.64 | 399,983.50 | 928.28 | 0°07'59" | | | 250 | 0.50 | 0.13 | | N 89°43'35" E | N 89°35'36" E |
| | ARC | CC | | 2242402.36 | 6610306.54 | | | | | | | | | | | |
| | ARC | CS | 6394+19.59 | 1842428.93 | 6613145.76 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | CLOTHOID | CS | 6394+19.59 | 1842428.93 | 6613145.76 | | | 0°02'53" | | | | | | | N 89°35'36" E | N 89°32'43" E |
| | CLOTHOID | SPI | 6396+42.92 | 1842430.52 | 6613369.09 | | 669.99 | | 334.99 | 0.05 | | | | | | |
| | CLOTHOID | ST | 6400+89.57 | 1842434.06 | 6613815.73 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | TANGENT | ST | 6400+89.57 | 1842434.06 | 6613815.73 | | 6,550.38 | | | | | | | N 89°32'43" E | | |
| V21-11 | TANGENT | TS | 6466+39.96 | 1842486.05 | 6620365.91 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | CLOTHOID | TS | 6466+39.96 | 1842486.05 | 6620365.91 | | | 0°02'18" | | | | | | | N 89°32'43" E | |
| | CLOTHOID | SPI | 6470+86.63 | 1842489.59 | 6620812.57 | | 670.01 | | 335.01 | 0.04 | | | | | | N 89°37'19" E |
| | CLOTHOID | SC | 6473+09.97 | 1842491.21 | 6621035.90 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | ARC | SC | 6473+09.97 | 1842491.21 | 6621035.90 | | | 0°04'46" | | | | | | | N 89°37'19" E | |
| | ARC | PI | 6476+56.87 | 1842493.74 | 6621382.79 | 500,016.50 | 693.81 | | | | 250 | 0.25 | 0.25 | | | N 89°37'29" E |
| | ARC | CC | | 1342487.91 | 6624668.96 | | | | | | | | | | | |
| | ARC | CS | 6480+03.77 | 1842495.77 | 6621729.69 | | | | | | | | | | | |
| V21-12 | | | | | | | | | | | | | | | | |
| | CLOTHOID | CS | 6480+03.77 | 1842495.77 | 6621729.69 | | | 0°02'18" | | | | | | | N 89°37'29" E | |
| | CLOTHOID | SPI | 6482+27.11 | 1842497.09 | 6621953.02 | | 670.01 | | 335.01 | 0.04 | | | | | | N 89°42'06" E |
| | CLOTHOID | ST | 6486+73.79 | 1842499.41 | 6622399.69 | | | | | | | | | | | |
| V21-13 | | | | | | | | | | | | | | | | |
| | TANGENT | ST | 6486+73.79 | 1842499.41 | 6622399.69 | | 785.62 | | | | | | | N 89°42'06" E | | |
| V21-14 | | | | | | | | | | | | | | | | |
| | TANGENT | POE | 6494+59.40 | 1842503.51 | 6623185.30 | | | | | | | | | | | |

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|-----|------|----|-----|-----|-------------|-------------------------|--|---|---|---|--------------------------|
| | | | | | | DESIGNED BY A. GURA | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY |  |  | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 21 TRACK GEOMERTY DATA | CONTRACT NO. HSR08-05 |
| | | | | | | DRAWN BY J. PAZ | | | | | DRAWING NO. TJ7906 |
| | | | | | | CHECKED BY S. GOOLLA | | | | | SCALE NO SCALE |
| | | | | | | IN CHARGE D. WEMMER | | | | | SHEET NO. |
| REV | DATE | BY | CHK | APP | DESCRIPTION | DATE 4/15/2011 | | | | | |

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| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR MAIN LINE AVE 21 SB | | | | | | | | |
|---|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR201 | 250 | 34483.5 | 4.25 | 3.00 | 1770 | 460+58.45 | 753+37.60 | T2103-A |

| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR MAIN LINE SB | | | | | | | | |
|--|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR202 | 250 | 43000 | 4.00 | 1.81 | 1200 | 994+31.92 | 1039+69.06 | T2113-A |
| UPRR203 | 250 | 28000 | 6.00 | 2.93 | 2000 | 1549+79.74 | 1629+23.78 | T2123-A |
| UPRR206 | 250 | 42995.5 | 3.25 | 2.56 | 1199.87 | 1702+48.14 | 1736+38.82 | T2126-A |
| UPRR207 | 250 | 43000 | 3.25 | 2.56 | 1200 | 1852+76.45 | 1927+63.38 | T2129-A |

| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR MERCED CONNECTION SB | | | | | | | | |
|--|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR109 | 150 | 32000 | | | 220 | 4586+53.68 | 4598+41.91 | T2200-A |
| UPRR110 | 150 | 23992.86 | 1.25 | 2.50 | 220 | 4598+41.91 | 4608+20.86 | T2200-A |
| UPRR111 | 250 | 28016.5 | 6.00 | 2.93 | 2000 | 4907+26.62 | 4956+59.33 | T2205-A |
| UPRR112 | 250 | 28000 | 6.00 | 2.93 | 2000 | 5050+05.89 | 5108+56.20 | T2208-A |
| UPRR113 | 250 | 28000 | 6.00 | 2.93 | 2000 | 5124+54.02 | 5174+08.99 | T2209-A |
| UPRR114 | 250 | 28016.5 | 6.00 | 2.93 | 2000 | 5232+60.88 | 5291+48.79 | T2211-A |
| UPRR115 | 150 | 10000 | 6.00 | 3.00 | 1200 | 5981+82.99 | 6030+04.80 | T2225-A |

| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR WYE-SB CONNECTION AVE 21 | | | | | | | | |
|--|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR118 | 150 | 32000 | | | 220 | 105+00 | 115+14.35 | T2260-A |
| UPRR119 | 150 | 24000.00 | 1.25 | 2.50 | 220 | 115+14.35 | 123+63.11 | T2260-A |
| UPRR120 | 140 | 8815.0 | 6.00 | 2.89 | 1200 | 159+29.36 | 366+54.03 | T2261-A |
| UPRR121 | 150 | 32000 | 3.19 | 2.81 | 220 | 406+82.55 | 416+33.89 | T2266-A |

| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR MAIN LINE AVE 21 NB | | | | | | | | |
|---|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR101 | 250 | 34500 | 4.25 | 3.00 | 1770 | 144+45.26 | 554+79.66 | T2303-A |

| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR MAIN LINE NB | | | | | | | | |
|--|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR102 | 250 | 43016.5 | 4.00 | 1.81 | 1200 | 995+50.80 | 1039+89.46 | T2113-A |
| UPRR103 | 250 | 27983.50 | 6.00 | 2.93 | 2000 | 1529+24.47 | 1651+63.77 | T2123-A |
| UPRR106 | 250 | 43013 | 3.25 | 2.56 | 1200 | 1714+43.54 | 1736+35.77 | T2125-A |
| UPRR107 | 250 | 43016.5 | 3.25 | 2.56 | 1200 | 1864+73.63 | 1915+62.74 | T2229-A |

| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR MERCED CONNECTION NB | | | | | | | | |
|--|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR109 | 150 | 32000 | | | 220 | 4586+53.68 | 4598+41.91 | T2200-A |
| UPRR110 | 150 | 23992.86 | 1.25 | 2.50 | 220 | 4598+41.91 | 4608+20.86 | T2123-A |
| UPRR211 | 250 | 28000 | 6.00 | 2.93 | 2000 | 4623+49.83 | 4656+64.10 | T2205-A |
| UPRR212 | 250 | 28016.5 | 6.00 | 2.93 | 2000 | 4681+01.16 | 4714+15.43 | T2208-A |
| UPRR213 | 250 | 28016.5 | 6.00 | 2.93 | 2000 | 5124+54.94 | 5174+11.64 | T2209-A |
| UPRR214 | 250 | 28000 | 6.00 | 2.93 | 2000 | 5232+63.53 | 5291+49.15 | T2211-A |
| UPRR215 | 150 | 10016.5 | 6.00 | 3.00 | 1200 | 5971+67.56 | 6040+06.61 | T2225-A |

| TRACK ALIGNMENT CURVE DATA SUMMARY TABLE - UPRR WYE - NB CONNECTION AVE 21 | | | | | | | | |
|--|---------------------------|--------------------|---------------------------------------|---|-------------------------------|------------------|----------------|------------------|
| CURVE | DESIGN SPEED (V) (MPH) | RADIUS (R) (FT) | ACTUAL SUPERELEVATION (Ea) (IN) | UNBALANCED SUPERELEVATION (Eu) (IN) | SPIRAL LENGTH (Ls) (FT) | BEGIN STATION | END STATION | BEGIN DRAWING |
| UPRR218 | 150 | 32000 | | | 220 | 505+00 | 517+72.80 | T2250-A |
| UPRR219 | 150 | 24020.25 | 1.25 | 2.50 | 220 | 517+72.80 | 527+52.23 | T2150-A |
| UPRR220 | 140 | 9000 | 6.00 | 2.71 | 1200 | 586+22.35 | 799+74.69 | T2251-A |
| UPRR221 | 150 | 24020.25 | 1.25 | 2.50 | 220 | 825+26.57 | 835+29.26 | T2155-A |
| UPRR222 | 150 | 32000 | 3.19 | 2.81 | 220 | 835+29.26 | 846+93.43 | T2256-A |

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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY T. WALTZ |
| CHECKED BY A. SHIELDS |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 ALIGNMENT
AVENUE 21
TRACK GEOMETRY DATA
SHEET 1 OF 1

| |
|---------------------------|
| CONTRACT NO. HSR06-007 |
| DRAWING NO. T0151-A |
| SCALE NO SCALE |
| SHEET NO. ### OF ### |

GENERAL NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
3. SEE STRUCTURES, VIADUCT AND TUNNEL PLANS FOR DETAILED CROSS SECTIONS OF STRUCTURES.
4. BALLASTED OR UNBALLASTED TRACK STRUCTURE TO BE DETERMINED.

SECTION A-A
TANGENT

STATION 5367+74.09 TO 5468+71.16

SUPERELEVATED

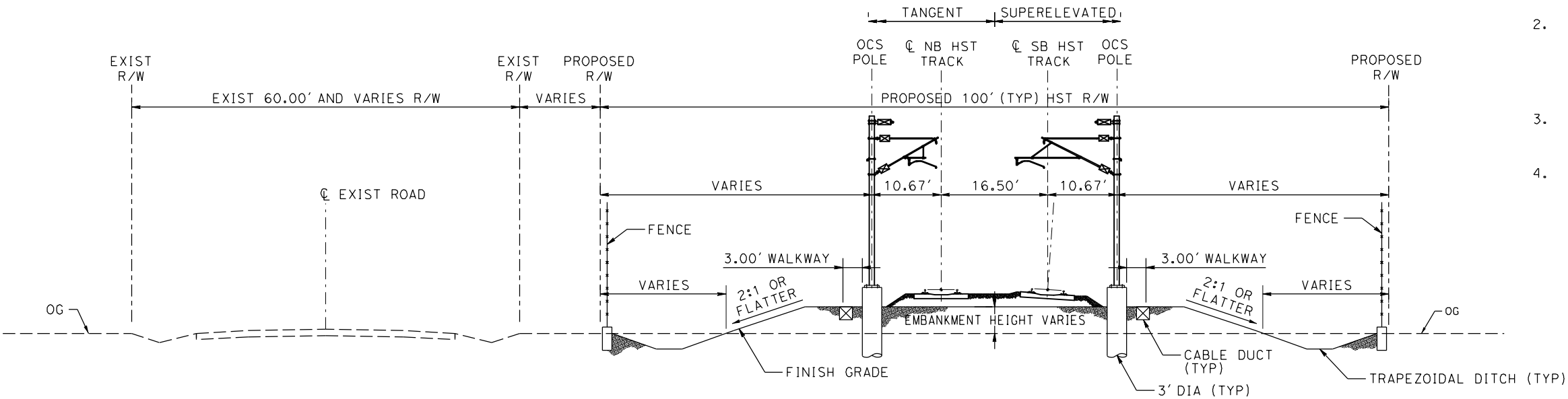
STATION 5468+71.16 TO 5494+50.00

SECTION B-B
TANGENT

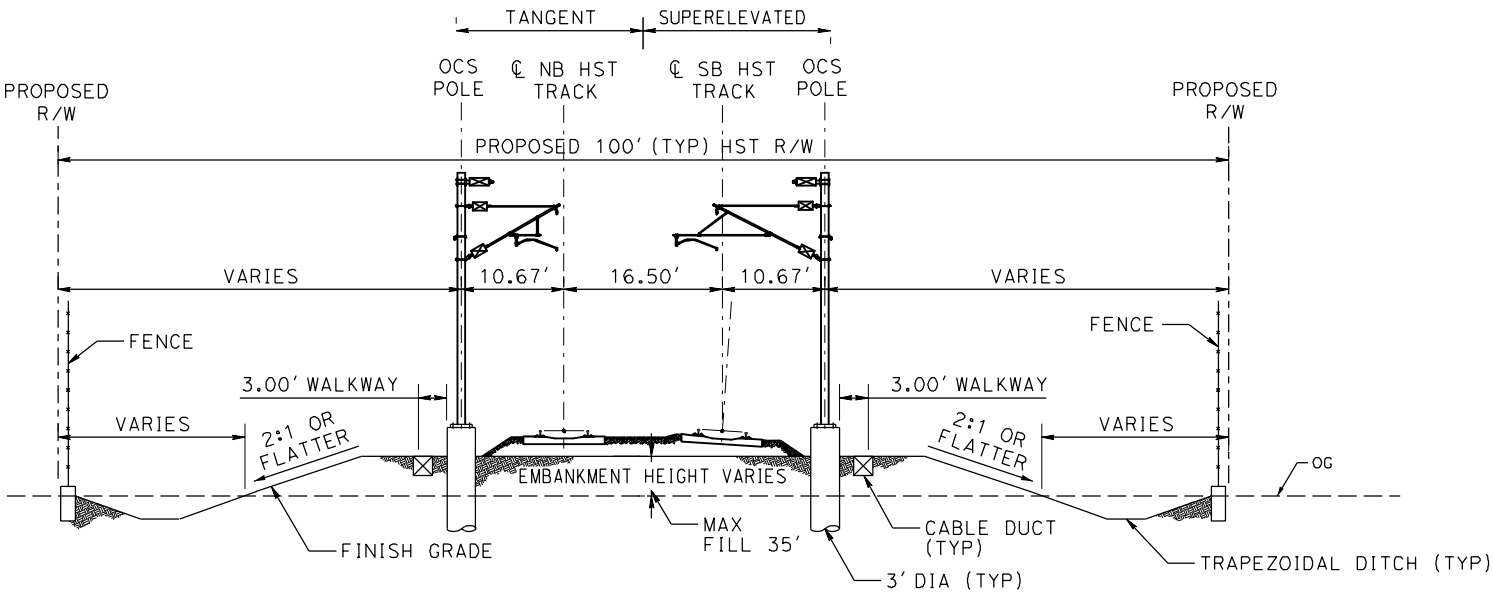
STATION 5944+30.06 TO 6095+69.95
STATION 6310+36.54 TO 6323+90.04

SUPERELEVATED

STATION 5494+50.00 TO 5582+51.76
STATION 6095+69.95 TO 6147+15.51
STATION 6277+56.72 TO 6310+30.54
STATION 6323+90.04 TO 6542+00.08



SECTION A-A
TRACK ON EMBANKMENT WITH ADJACENT ROAD



SECTION B-B
TRACK ON EMBANKMENT WITH ADJACENT ROAD

NOTE:
POTENTIAL SOUND BARRIERS NOT
SHOWN IN CROSS SECTIONS. FOR THE EXTENT
OF POTENTIAL SOUND BARRIERS, SEE
ALIGNMENT PLAN AND PROFILE SHEETS

DESIGNED BY
P. JACOBY
DRAWN BY
ALBERT S.
CHECKED BY
RESHMA C.
IN CHARGE
D. WEMMER
DATE
4/15/2011

15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY

NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TYPICAL SECTION

CONTRACT NO.
HSR08-05
DRAWING NO.
TJ3401A
SCALE
1"=10'
SHEET NO.

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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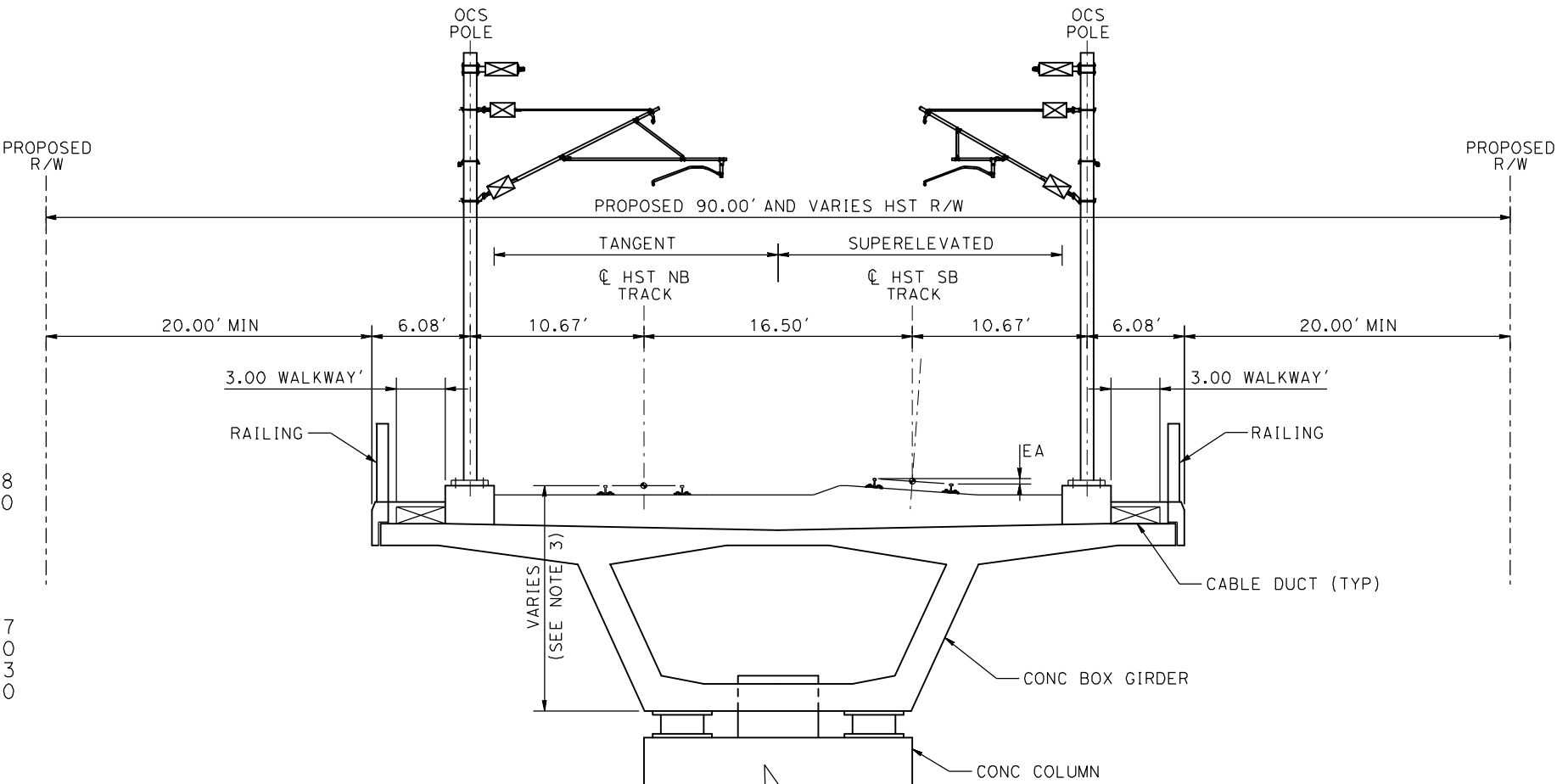
NOTE:
POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS

SECTION A-A
TANGENT

STATION 5617+79.47 TO 5656+79.58
STATION 5807+75.83 TO 5906+50.00

SUPERELEVATED

STATION 5617+00.00 TO 5617+79.47
STATION 5656+79.58 TO 5703+50.00
STATION 5764+00.00 TO 5807+75.83
STATION 6178+00.00 TO 6248+00.00



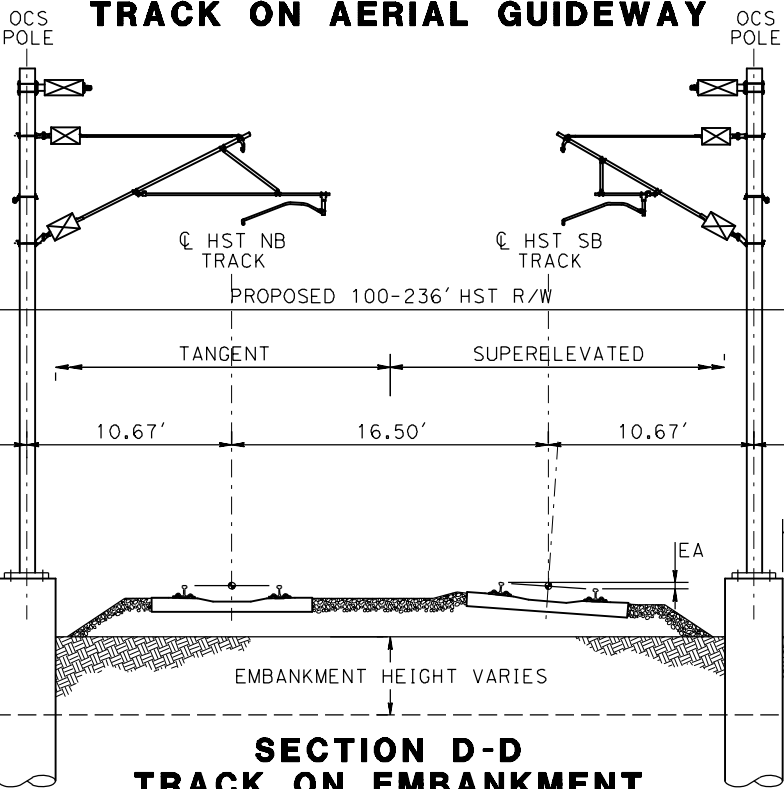
SECTION B-B
TANGENT

STATION 5906+50.00 TO 5944+30.06

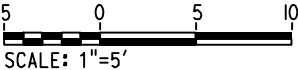
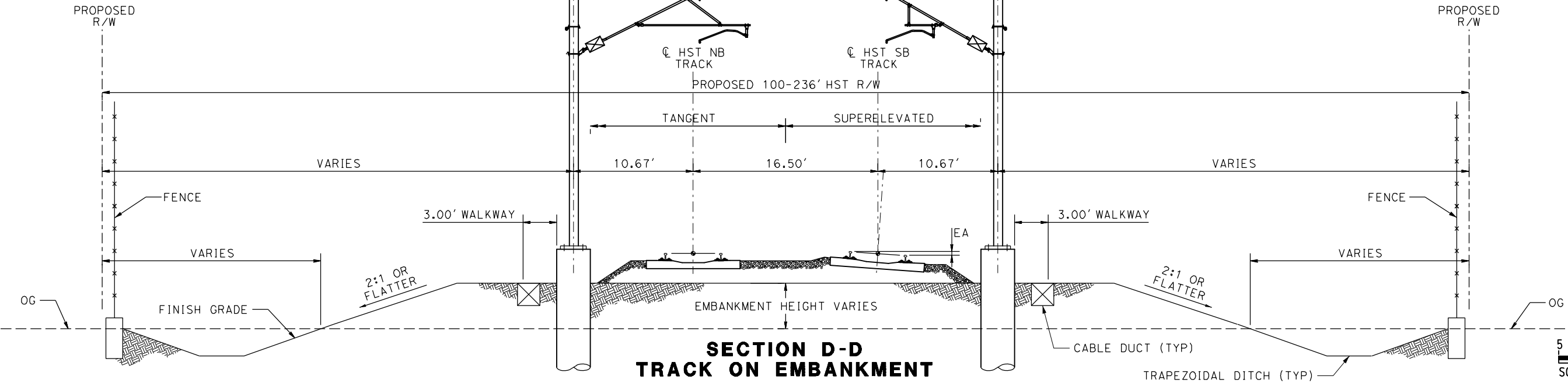
SUPERELEVATED

STATION 5582+51.76 TO 5617+00.00
STATION 5703+50.00 TO 5764+00.00
STATION 6147+15.51 TO 6178+00.00
STATION 6248+00.00 TO 6277+56.72

SECTION C-C
TRACK ON AERIAL GUIDEWAY



SECTION D-D
TRACK ON EMBANKMENT



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DESIGNED BY
P. JACOBY
DRAWN BY
ALBERT S.
CHECKED BY
RESHMA C.
IN CHARGE
D. WEMMER
DATE
4/15/2011

**15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY**

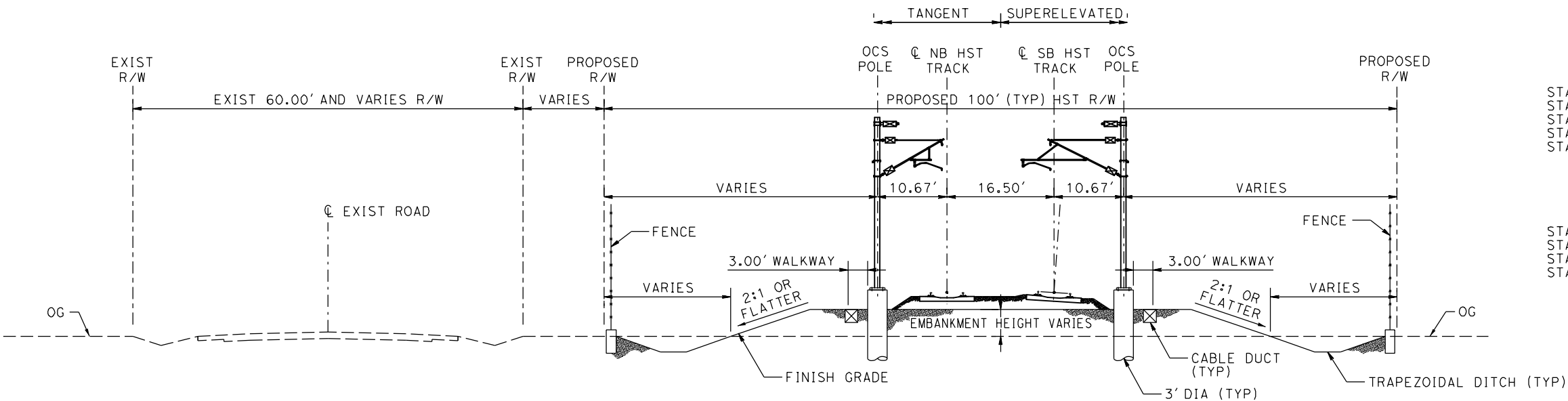
**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TYPICAL SECTION

CONTRACT NO.
HSR08-05
DRAWING NO.
TJ3402A
SCALE
1"=5'
SHEET NO.

NOTE:
POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS



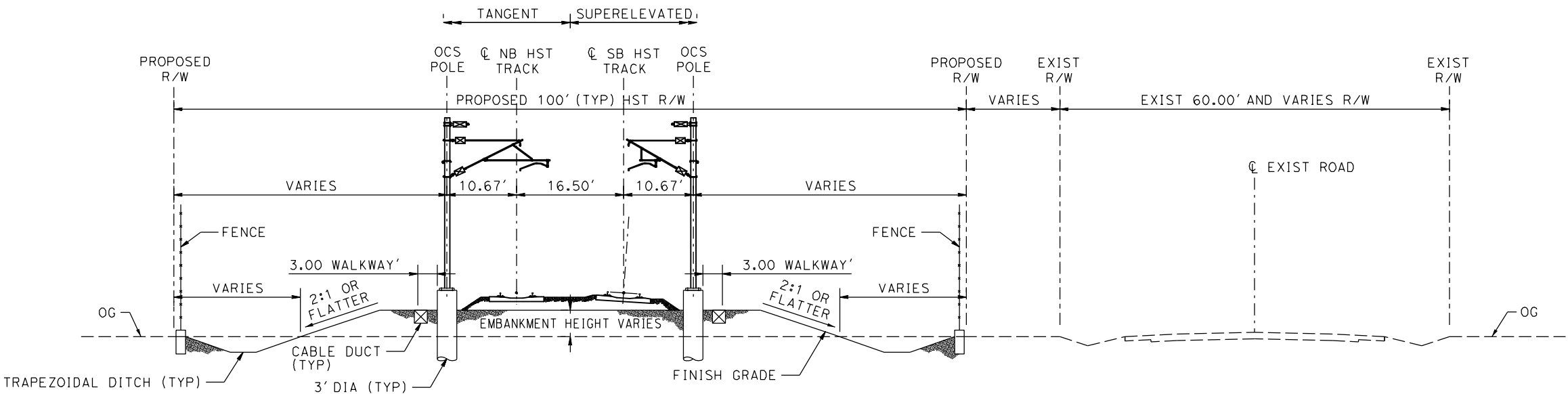
SECTION C-C
TRACK ON EMBANKMENT WITH ADJACENT ROAD

SECTION C
TANGENT

STATION A 4695+35.55 TO A 4697+25.00
STATION A 4782+00.00 TO A 4821+82.78
STATION A 4842+01.13 TO A 4956+10.00
STATION A 5038+90.00 TO A 5254+31.95
STATION A 5289+21.13 TO A 5367+74.09

SUPERELEVATED

STATION A 4663+00.00 TO A 4695+35.55
STATION A 4821+82.78 TO A 4842+01.13
STATION A 5254+31.95 TO A 5289+21.13
STATION A 5367+74.09 TO A 5400+00.00



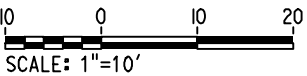
SECTION D-D
TRACK ON EMBANKMENT WITH ADJACENT ROAD

SECTION D
TANGENT

STATION A 5953+15.11 TO A 6065+36.88
STATION A 6085+46.45 TO A 6097+25.00
STATION A 6163+75.00 TO A 6248+11.13
STATION A 6268+87.43 TO A 6389+93.79
STATION A 6412+62.12 TO A 6748+12.50
STATION A 6498+46.27 TO A 6506+31.89

SUPERELEVATED

STATION A 4639+00.00 TO A 4663+00.00
STATION A 5900+95.00 TO A 5953+15.11
STATION A 6065+36.88 TO A 6085+46.45
STATION A 6248+11.13 TO A 6268+87.43
STATION A 6389+93.79 TO A 6412+62.12
STATION A 6748+12.50 TO A 6498+46.27



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| | 4/15/11 | | | | DRAFT 15% SUBMITTAL |
| REV | DATE | BY | CHK | APP | DESCRIPTION |

DESIGNED BY
A. GURA
DRAWN BY
S. HICKS
CHECKED BY
S. GOOLLA
IN CHARGE
D. WEMMER
DATE
4/15/2011

15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY

NOT FOR
CONSTRUCTION

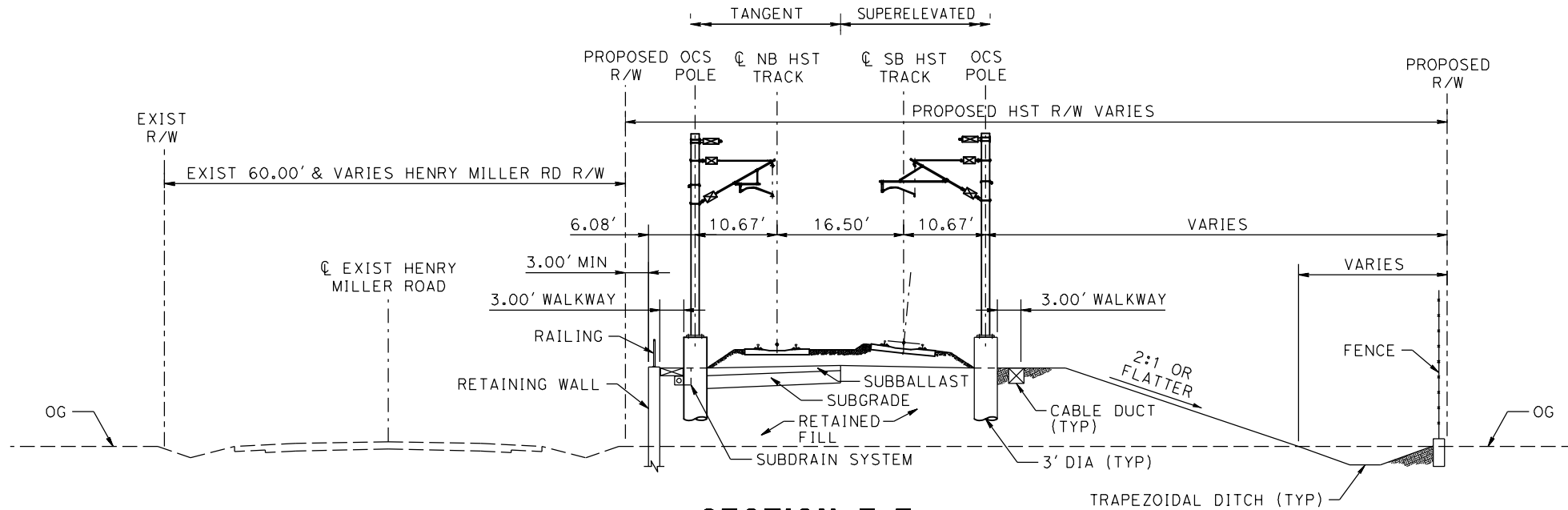


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
TYPICAL SECTIONS
SHEET 2 OF 3

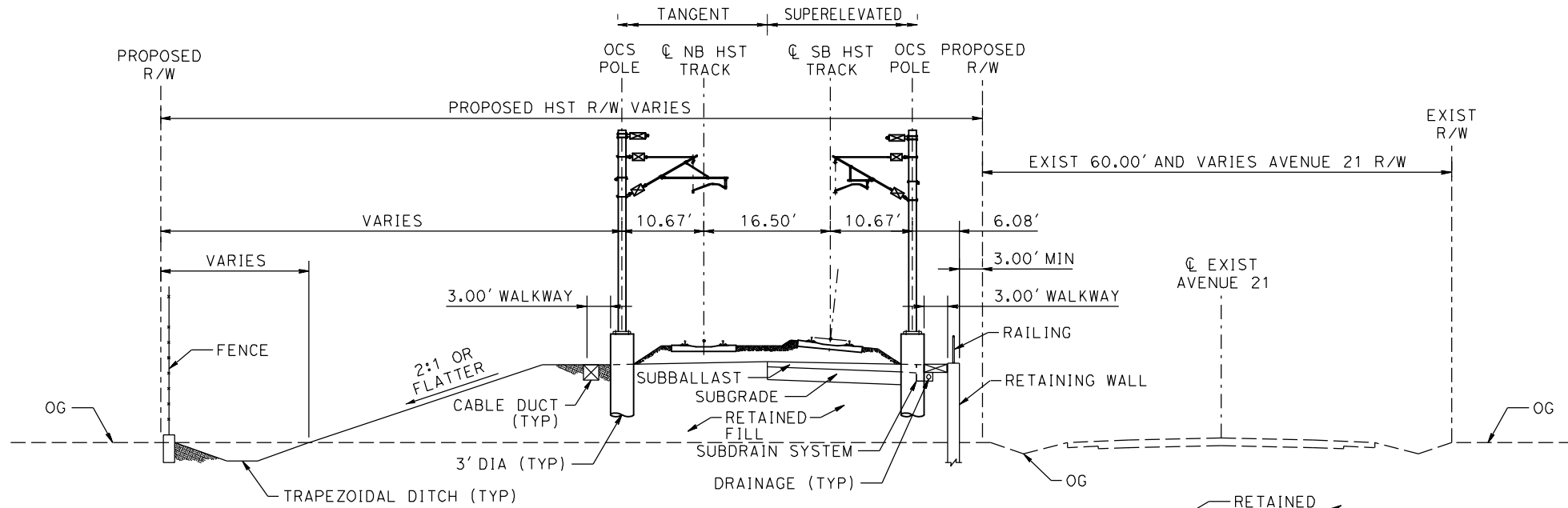
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| CONTRACT NO. HSR08-05 |
| DRAWING NO. TJ3902 |
| SCALE 1"=10' |
| SHEET NO. |

NOTE: POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS



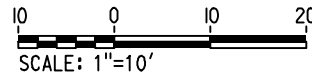
SECTION E-E
TYPICAL SECTION WITH RETAINED FILL ON LEFT

TANGENT STATION A 4697+25 TO A 4723+88
STATION A 4767+88 TO A 4782+00
SUPERELEVATED N/A



SECTION E-E
TYPICAL SECTION WITH RETAINED FILL ON RIGHT

TANGENT STATION A 6097+25 TO A 6116+75
STATION A 6142+00 TO A 6163+75
SUPERELEVATED N/A



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DESIGNED BY
A. GURA
DRAWN BY
A. GURA
CHECKED BY
S. GOOLLA
IN CHARGE
D. WEMMER
DATE
4/15/2011

**15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY**

**NOT FOR
CONSTRUCTION**



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
TYPICAL SECTIONS
SHEET 3 OF 3

CONTRACT NO.
HSR08-05
DRAWING NO.
TJ3903
SCALE
1" = 10'
SHEET NO.

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ShieldsA

| ALTERNATIVE HYBRID AVENUE 24 | | | |
|------------------------------|---------------|-------------|---------|
| ALIGNMENT | BEGIN STATION | END STATION | SECTION |
| HYBRID 24 | 892+90 | 926+80 | AG2 |
| | 926+80 | 1020+00 | WYE1 |
| | 1020+00 | 1185+00 | AG2 |
| | 1185+00 | 1230+00 | WYE1 |
| | 1230+00 | 1360+00 | AG2 |
| | 1360+00 | 1375+00 | RF2 |
| | 1375+00 | 1435+00 | EL1 |
| | 1435+00 | 1443+00 | RF2 |
| | 1443+00 | 2681+00 | AG2 |
| | 2681+00 | 2695+00 | RF2 |
| | 2695+00 | 2731+50 | EL1 |
| | 2731+50 | 2740+55 | EL5 |
| | 1713+98 | 1737+00 | EL6 |
| | 1737+00 | 1764+78 | EL7 |
| | 1764+78 | 1767+00 | EL8 |
| HYBRID-FR | 1767+00 | 1788+84 | RF3 |
| | 1788+84 | 1843+35 | AG6 |
| | 1843+35 | 1893+95 | RF3 |
| | 1893+95 | 1958+00 | AG6 |
| | 1958+00 | 2072+36 | AG7 |
| UPRR/SR 99 WCD0/HYBRID MC SB | 5061+66 | 5015+00 | WYE1 |
| | 5015+00 | 5235+00 | AG4 |
| | 5235+00 | 5285+00 | WYE 1 |
| | 5288+00 | 5556+91 | AG2 |
| UPRR/SR 99 WCD0/HYBRID MC NB | 5058+80 | 5110+00 | WYE1 |
| | 5110+00 | 5121+00 | EL2 |
| | 5121+00 | 5127+00 | RF2 |
| | 5127+00 | 5235+00 | AG4 |
| | 2535+00 | 5285+00 | WYE1 |
| | 5285+00 | 5597+00 | AG2 |
| UPRR/SR 99-21MC | 5556+98 | 5910+00 | AG1 |
| | 5910+00 | 5916+50 | TR2 |
| | 5916+50 | 5917+60 | CC1 |
| | 5917+60 | 5925+00 | TR2 |
| | 5925+00 | 5977+70 | AG1 |
| | 5977+70 | 5989+20 | TR2 |
| | 5989+20 | 5990+20 | CC1 |
| | 5990+20 | 6003+00 | TR2 |
| | 6003+00 | 6022+00 | AG1 |
| | 6022+00 | 6040+60 | TR2 |
| | 6040+60 | 6042+90 | CC1 |
| | 6042+90 | 6052+50 | TR1 |
| | 6052+50 | 6066+20 | AG5 |
| UPRR/SR 99 WCD0/HYBRID WC NB | 148+82 | 205+00 | WYE1 |
| | 205+00 | 211+00 | EL2 |
| | 211+00 | 219+00 | RF2 |
| | 219+00 | 313+50 | AG4 |
| | 313+50 | 320+00 | RF2 |
| | 320+00 | 330+00 | EL2 |
| | 330+00 | 382+25 | WYE1 |
| | 524+67 | 570+00 | WYE1 |
| UPRR/SR 99 WCD0/HYBRID WC SB | 570+00 | 695+00 | AG4 |
| | 695+00 | 738+88 | WYE1 |

| ALTERNATIVE HYBRID AVENUE 21 | | | |
|------------------------------|---------------|-------------|---------|
| ALIGNMENT | BEGIN STATION | END STATION | SECTION |
| HYBRID 21 | 892+90 | 330+00 | AG2 |
| | 330+00 | 430+00 | WYE1 |
| | 430+00 | 565+00 | AG2 |
| | 565+00 | 580+00 | RF2 |
| | 580+00 | 630+00 | EL1 |
| | 630+00 | 640+00 | RF2 |
| | 640+00 | 680+00 | WYE1 |
| | 680+00 | 868+87= | AG2 |
| | 1865+00 | 2681+00 | AG2 |
| | 2681+00 | 2695+00 | RF2 |
| | 2695+00 | 2731+50 | EL1 |
| | 2731+50 | 2740+55 | EL5 |
| | 1713+98 | 1737+00 | EL6 |
| | 1737+00 | 1764+78 | EL7 |
| | 1764+78 | 1767+00 | EL8 |
| HYBRID-FR | 1767+00 | 1788+84 | RF3 |
| | 1788+84 | 1843+35 | AG6 |
| | 1843+35 | 1893+95 | RF3 |
| | 1893+95 | 1958+00 | AG6 |
| | 1958+00 | 2072+36 | AG7 |
| HYBRID MC SB - 21 | 200+20 | 250+00 | WYE1 |
| | 250+00 | 290+00 | EL2 |
| | 290+00 | 377+99 | EL1 |
| HYBRID MC NB - 21 | 500+00 | 550+00 | WYE1 |
| | 550+00 | 590+00 | EL2 |
| | 590+00 | 677+40 | EL1 |
| UPRR/SR 99-21MC | 4907+27 | 4975+00 | EL1 |
| | 4975+00 | 5045+00 | WYE2 |
| | 5045+00 | 5385+00 | EL1 |
| | 5385+00 | 5425+00 | RF2 |
| | 5425+00 | 5910+00 | AG1 |
| | 5910+00 | 5915+50 | TR2 |
| | 5915+50 | 5916+60 | CC1 |
| | 5916+60 | 5924+00 | TR2 |
| | 5924+00 | 5977+70 | AG1 |
| | 5977+70 | 5989+30 | TR2 |
| UPRR/SR 99-21WC NB | 5989+30 | 5990+40 | CC1 |
| | 5990+40 | 6003+00 | TR2 |
| | 6003+00 | 6022+00 | AG1 |
| | 6022+00 | 6040+60 | TR2 |
| | 6040+60 | 6042+90 | CC1 |
| | 6042+90 | 6052+50 | TR1 |
| | 6052+50 | 6066+20 | AG5 |
| | 505+00 | 610+00 | WYE1 |
| | 610+00 | 619+50 | EL2 |
| | 619+50 | 628+35 | RF1 |
| | 628+35 | 714+80 | AG4 |
| | 714+80 | 724+20 | RF1 |
| | 724+20 | 780+00 | EL2 |
| | 780+00 | 846+94 | WYE2 |
| | 105+00 | 180+00 | WYE1 |
| UPRR/SR 99-21WC SB | 180+00 | 298+80 | AG4 |
| | 298+80 | 313+21 | RF1 |
| | 313+21 | 340+00 | EL2 |
| | 340+00 | 397+52 | WYE2 |

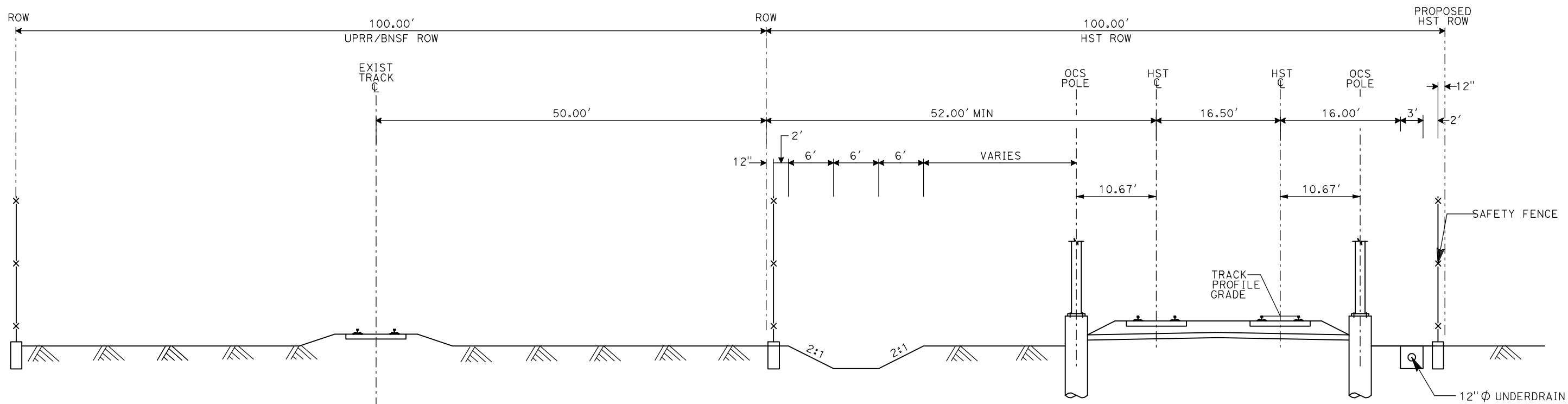
| ALTERNATIVE BNSF AVENUE 21 | | | |
|----------------------------|---------------|-------------|---------|
| ALIGNMENT | BEGIN STATION | END STATION | SECTION |
| BNSF-21ML | 267+41 | 562+00 | AG2 |
| | 562+00 | 582+61 | RF2 |
| | 582+61 | 634+76 | EL1 |
| | 634+76 | 665+80 | RF2 |
| | 665+80 | 859+40 | AG2 |
| | 859+40 | 881+05 | RF2 |
| | 881+05 | 925+00 | EL1 |
| | 925+00 | 985+00 | WYE1 |
| | 985+00 | 1042+75 | EL1 |
| | 1042+75 | 1060+00 | RF2 |
| | 1060+00 | 1305+00 | AG1 |
| | 1305+00 | 1685+00 | AG2 |
| | 1685+00 | 1696+00 | RF2 |
| | 1667+59 | 1731+50 | EL1 |
| | 1731+50 | 1741+00 | EL5 |
| BNSF-FR | 1713+98 | 1737+00 | EL6 |
| | 1737+00 | 1764+78 | EL7 |
| | 1764+78 | 1767+00 | EL8 |
| | 1767+00 | 1788+84 | RF3 |
| | 1788+84 | 1843+35 | AG6 |
| | 1843+35 | 1893+95 | RF3 |
| | 1893+95 | 1958+00 | AG6 |
| | 1958+00 | 2072+36 | AG7 |
| BNSF-21WC NB | 105+85 | 205+00 | WYE2 |
| | 205+00 | 220+66 | EL2 |
| | 220+66 | 230+00 | RF1 |
| | 230+00 | 357+00 | AG4 |
| | 357+00 | 371+02 | RF1 |
| | 371+02 | 383+00 | EL2 |
| BNSF-21WC SB | 383+00 | 474+09 | WYE1 |
| | 500+00 | 550+00 | WYE2 |
| | 550+00 | 720+00 | AG4 |
| | 720+00 | 765+39 | WYE1 |
| BNSF-MC | 4302+03 | 4345+02 | EL2 |
| | 4345+02 | 4351+00 | RF1 |
| | 4351+00 | 4405+00 | WYE1 |
| | 4405+00 | 5296+45 | AG1 |
| | 5269+45 | 5266+88 | RF2 |
| | 5266+88 | 5352+88 | EL3 |
| | 5352+88 | 5371+50 | RF2 |
| | 5371+50 | 5850+85 | AG1 |
| | 5850+85 | 5866+57 | RF2 |
| | 5866+57 | 5960+00 | EL1 |
| | 5960+00 | 5967+00 | RF2 |
| | 5967+00 | 5977+70 | AG1 |
| | 5977+70 | 5989+20 | TR2 |
| | 5989+20 | 5990+20 | CC1 |
| | 5990+20 | 6003+00 | TR2 |
| BNSF-24WC NB | 6003+00 | 6022+00 | AG1 |
| | 6022+00 | 6040+60 | TR2 |
| | 6040+60 | 6042+90 | CC1 |
| | 6042+90 | 6052+50 | TR1 |
| | 6052+50 | 6066+20 | AG5 |
| BNSF-24WC SB | 500+00 | 582+14 | WYE2 |
| | 582+14 | 592+75 | RF1 |
| | 592+75 | 840+00 | AG4 |
| | 840+00 | 896+06 | WYE1 |

| ALTERNATIVE BNSF AVENUE 24 | | | |
|----------------------------|---------------|-------------|---------|
| ALIGNMENT | BEGIN STATION | END STATION | SECTION |
| BNSF-24ML | 892+90 | 1185+00 | AG2 |
| | 1185+00 | 1235+00 | WYE1 |
| | 1235+00 | 1332+20 | AG2 |
| | 1332+20 | 1350+84 | RF2 |
| | 1350+84 | 1430+00 | WYE2 |
| | 1430+00 | 1431+49 | EL1 |
| | 1431+49 | 1451+90 | RF2 |
| | 1451+90 | 1864+25 | AG2 |
| | 1864+25 | 1881+05 | RF2 |
| | 1881+05 | 1890+17 | EL1 |
| BNSF-24WC NB | 104+65 | 195+00 | WYE2 |
| | 195+00 | 220+66 | EL2 |
| | 220+66 | 227+55 | RF1 |
| | 227+55 | 400+70 | AG4 |
| | 400+70 | 438+00 | RF1 |
| | 438+00 | 450+00 | EL2 |
| | 450+00 | 477+55 | WYE1 |
| | 477+55 | 508+20 | RF1 |
| BNSF-24WC SB | 508+20 | 576+13 | AG4 |
| | 500+00 | 582+14 | WYE2 |
| | 582+14 | 592+75 | RF1 |
| | 592+75 | 840+00 | AG4 |

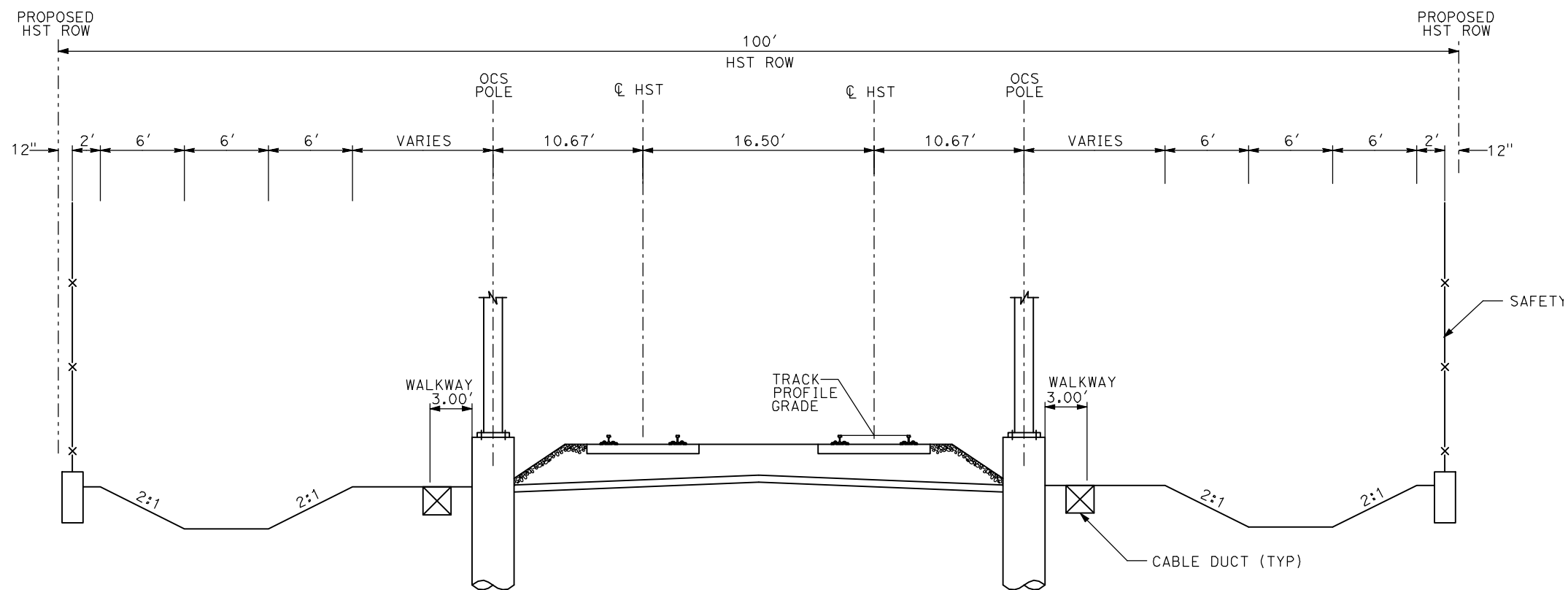
| ALTERNATIVE UPRR/ SR 99 AVENUE 21 | | | |
|-----------------------------------|---------------|-------------|---------|
| ALIGNMENT | BEGIN STATION | END STATION | SECTION |
| UPRR/SR 99-21ML | 270+60 | 604+70 | AG2 |
| | 604+70 | 626+28 | RF2 |
| | 626+28 | 715+00 | EL1 |
| | 715+00 | 805+00 | WYE1 |
| | 805+00 | 1294+33 | EL1 |
| | 1294+33 | 1305+00 | RF2 |
| | 1305+00 | 1570+00 | AG1 |
| | 1570+00 | 1593+20 | TR2 |
| | 1593+20 | 1594+10 | CC1 |
| | 1594+10 | 1610+00 | TR2 |
| | 1610+00 | 1615+00 | AG1 |
| | 1615+00 | 1622+00 | RF2 |
| | 1622+00 | 1635+00 | EL1 |
| | 1635+00 | 1633+24 | EL5 |
| UPRR/SR 99-FR | 1713+98 | 1737+00 | EL6 |
| | 1737+00 | 1764+78 | EL7 |
| | 1764+78 | 1767+00 | EL8 |
| | 1767+00 | 1788+84 | RF3 |
| | 1788+84 | 1843+35 | AG6 |
| | 1843+35 | 1893+95 | RF3 |
| | 1893+95 | 1958+00 | AG6 |
| | 1958+00 | 2072+36 | AG7 |
| UPRR/SR 99-21WC NB | 505+00 | 610+00 | WYE1 |
| | 610+00 | 619+50 | EL2 |
| | 619+50 | 628+35 | RF1 |
| | 628+35 | 714+80 | AG4 |
| | 714+80 | 724+20 | RF1 |
| | 724+20 | 780+00 | EL2 |
| | 780+00 | 846+94 | WYE2 |
| UPRR/SR 99-21WC SB | 105+00 | 180+00 | WYE1 |
| | 180+00 | 298+80 | AG4 |
| | 298+80 | 313+21 | RF1 |
| | 313+21 | 340+00 | EL2 |
| | 340+00 | 397+52 | WYE2 |
| UPRR/SR 99-21MC | 4586+50 | 4670+00 | WYE1 |
| | 4670+00 | 4796+00 | AG1 |
| | 4796+00 | 4810+00 | RF2 |
| | 4810+00 | 4975+00 | EL1 |
| | 4975+00 | 5045+00 | WYE2 |
| | 5045+00 | 5385+00 | EL1 |
| | 5385+00 | 5425+00 | RF2 |
| | 5425+00 | 5910+00 | AG1 |
| | 5910+00 | 5915+50 | TR2 |
| | 5915+50 | 5916+60 | CC1 |
| | 5916+60 | 5924+00 | TR2 |
| | 5924+00 | 5977+70 | AG1 |
| | 5977+70 | 5989+30 | TR2 |
| | 5989+30 | 5990+40 | CC1 |
| | 5990+40 | 6003+00 | TR2 |
| UPRR/SR 99-21WC SB | 6003+00 | 6022+00 | AG1 |
| | 6022+00 | 6040+60 | TR2 |
| | 6040+60 | 6042+90 | CC1 |
| | 6042+90 | 6052+50 | TR1 |
| | 6052+50 | 6066+20 | AG5 |

| ALTERNATIVE UPRR/ SR 99 AVENUE 24 | | | |
|-----------------------------------|---------------|-------------|---------|
| ALIGNMENT | BEGIN STATION | END STATION | SECTION |
| UPRR/SR 99-24ML | 917+20 | 965+00 | AG2 |
| | 965+00 | 1030+00 | WYE1 |
| | 1030+00 | 1330+00 | AG2 |
| | 1330+00 | 1380+00 | RF2 |
| | 1380+00 | 1515+00 | EL1 |
| | 1515+00 | 1590+00 | EL5 |
| UPRR/SR 99-24WC NB | 1590+00 | 1753+40 | EL1 |
| | | | |
| | 105+00 | 205+00 | WYE1 |
| | 205+00 | 220+00 | EL2 |
| | 220+00 | 227+00 | RF1 |
| | 227+00 | 349+90 | AG4 |
| | 349+90 | 494+12 | AG2 |
| | 494+12 | 521+00 | AG4 |
| | 521+00 | 527+00 | RF1 |
| | 527+00 | 555+00 | EL2 |
| | 555+00 | 626+90 | WYE1 |
| UPRR/SR 99-24WC SB | | | |
| | 705+00 | 775+00 | WYE1 |
| | 775+00 | 921+72 | AG4 |
| | 921+72 | 1062+85 | AG2 |
| | 1062+85 | 1130+00 | AG4 |
| | 1130+00 | 1191+24 | WYE 1 |
| UPRR/SR 99-24MC | | | |
| | 4760+15 | 4845+00 | WYE2 |
| | 4845+00 | 4907+25 | EL1 |

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AG1- DOUBLE TRACK AT GRADE ADJACENT TO UPRR/BNSF



AG2 - DOUBLE TRACK AT GRADE

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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DESIGNED BY
A. SHIELDS
DRAWN BY
C. VALADAO
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

TYPICAL SECTIONS
SHEET 1 OF 17

| | |
|--------------|-----------|
| CONTRACT NO. | HSR06-007 |
| DRAWING NO. | T3001-A |
| SCALE | NO SCALE |
| SHEET NO. | OF ### |



- ## CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

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| CONTRACT NO. | HSR06-007 |
| DRAWING NO. | T3002-A |
| SCALE | NO SCALE |
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| DESIGNED BY | A. SHIELDS |
| DRAWN BY | C. VALADAO |
| CHECKED BY | A. BOONE |
| IN CHARGE | A. BOONE |
| DATE | 07/20/2011 |

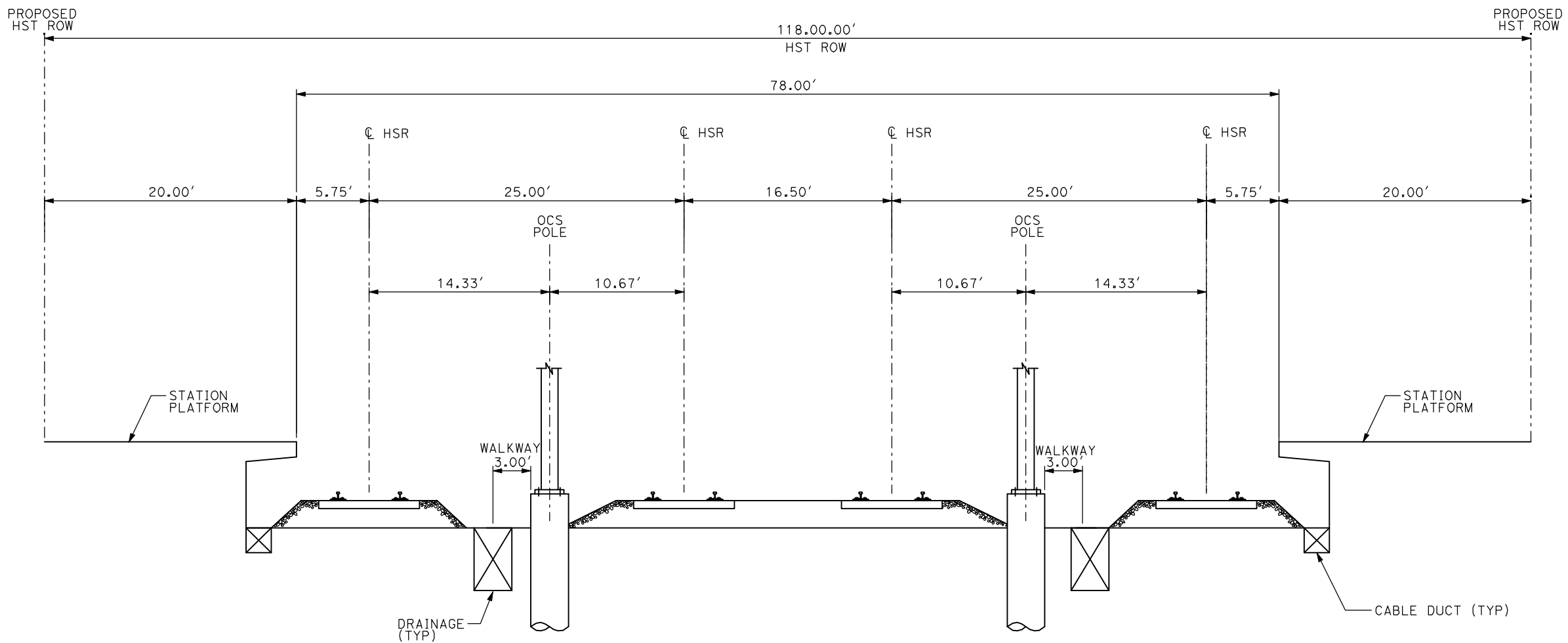
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2020 L Street, Suite 300
Sacramento, CA 95811

CH2M HILL



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY



AG5 - 4 TRACK AT GRADE MERCED STATION

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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| DESIGNED BY A. SHIELDS |
| DRAWN BY C. VALADAO |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

**RECORD SET
15% DESIGN
SUBMITTAL**

**NOT FOR
CONSTRUCTION**

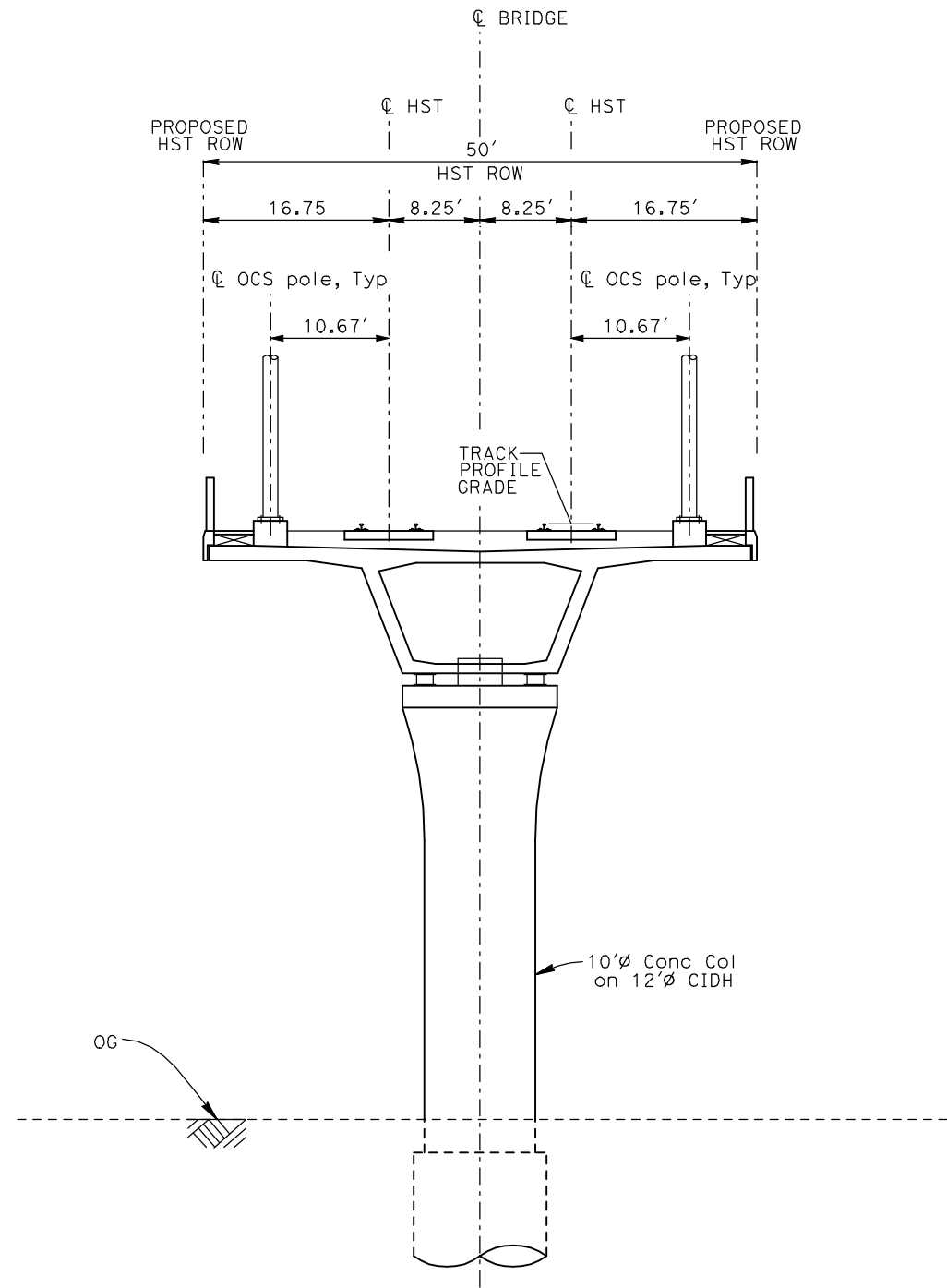


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

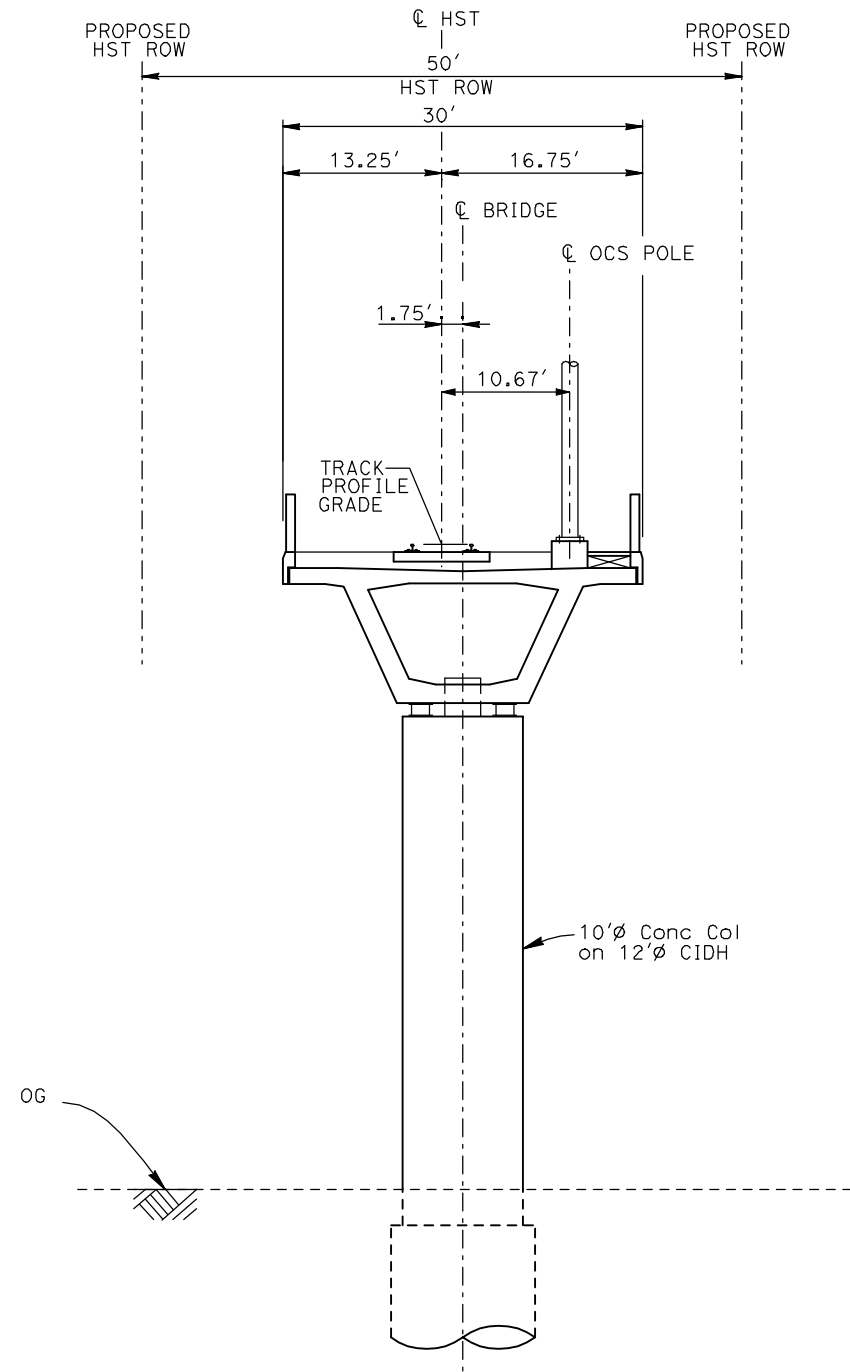
TYPICAL SECTIONS
SHEET 3 OF 17

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3003-A |
| SCALE NO SCALE |
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EL1 - DOUBLE TRACK ELEVATED



EL2 - SINGLE TRACK ELEVATED

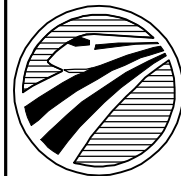
- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. BACK-TO-BACK CANTILEVERS ON A SINGLE POLE MAY BE PERMITTED AT PASSENGER STATIONS.
 3. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 4. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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| DESIGNED BY A. SHIELDS |
| DRAWN BY C. VALADAO |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

**RECORD SET
15% DESIGN
SUBMITTAL**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA
HIGH-SPEED RAIL AUTHORITY**

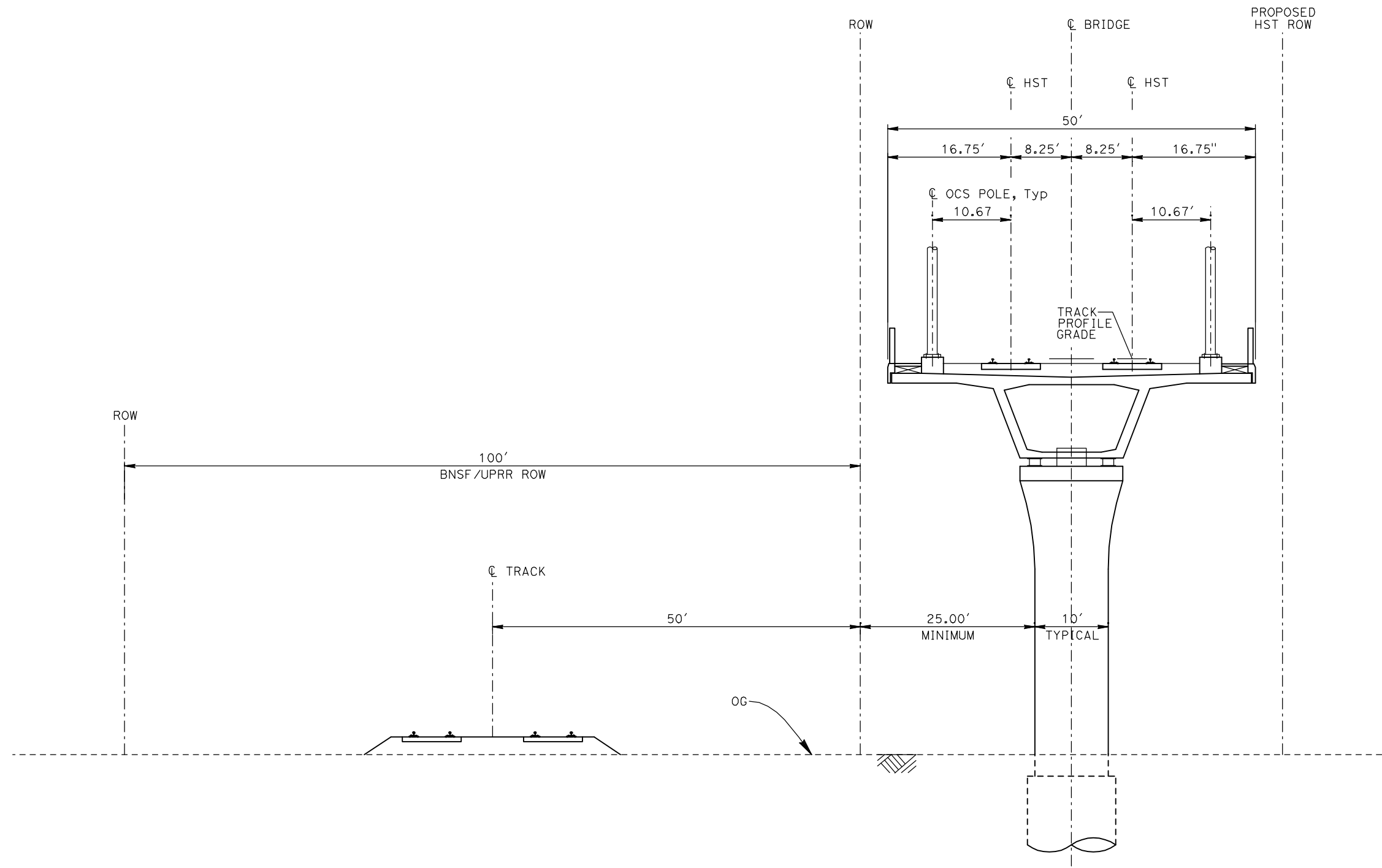
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

TYPICAL SECTIONS
SHEET 4 OF 17

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3004-A |
| SCALE NO SCALE |
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EL3 - DOUBLE TRACK ELEVATED ADJACENT TO UPRR/BNSF

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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DESIGNED BY
A. SHIELDS
DRAWN BY
C. VALADAO
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

**RECORD SET
15% DESIGN
SUBMITTAL**

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Sacramento, CA 95811

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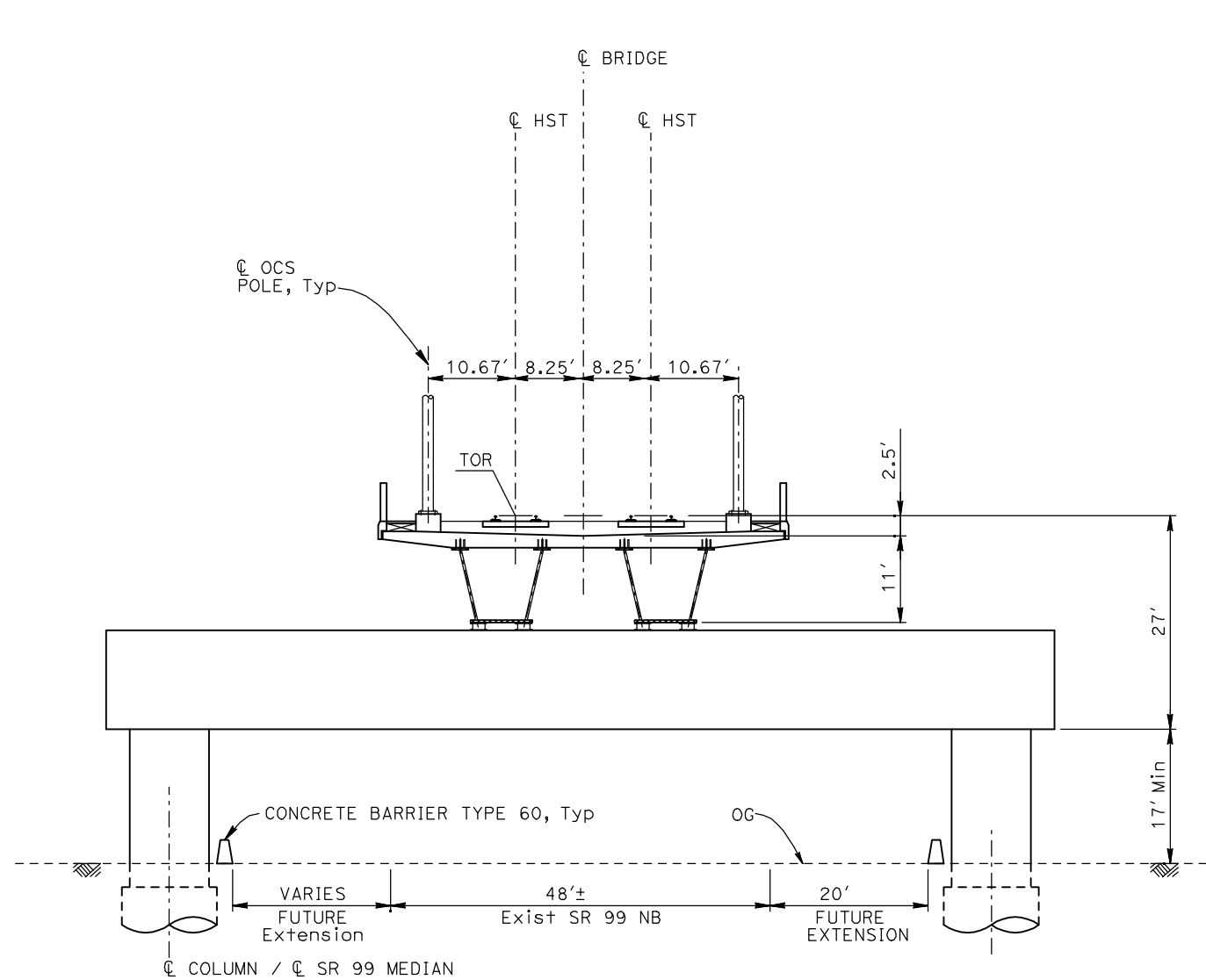
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

TYPICAL SECTIONS
SHEET 5 OF 17

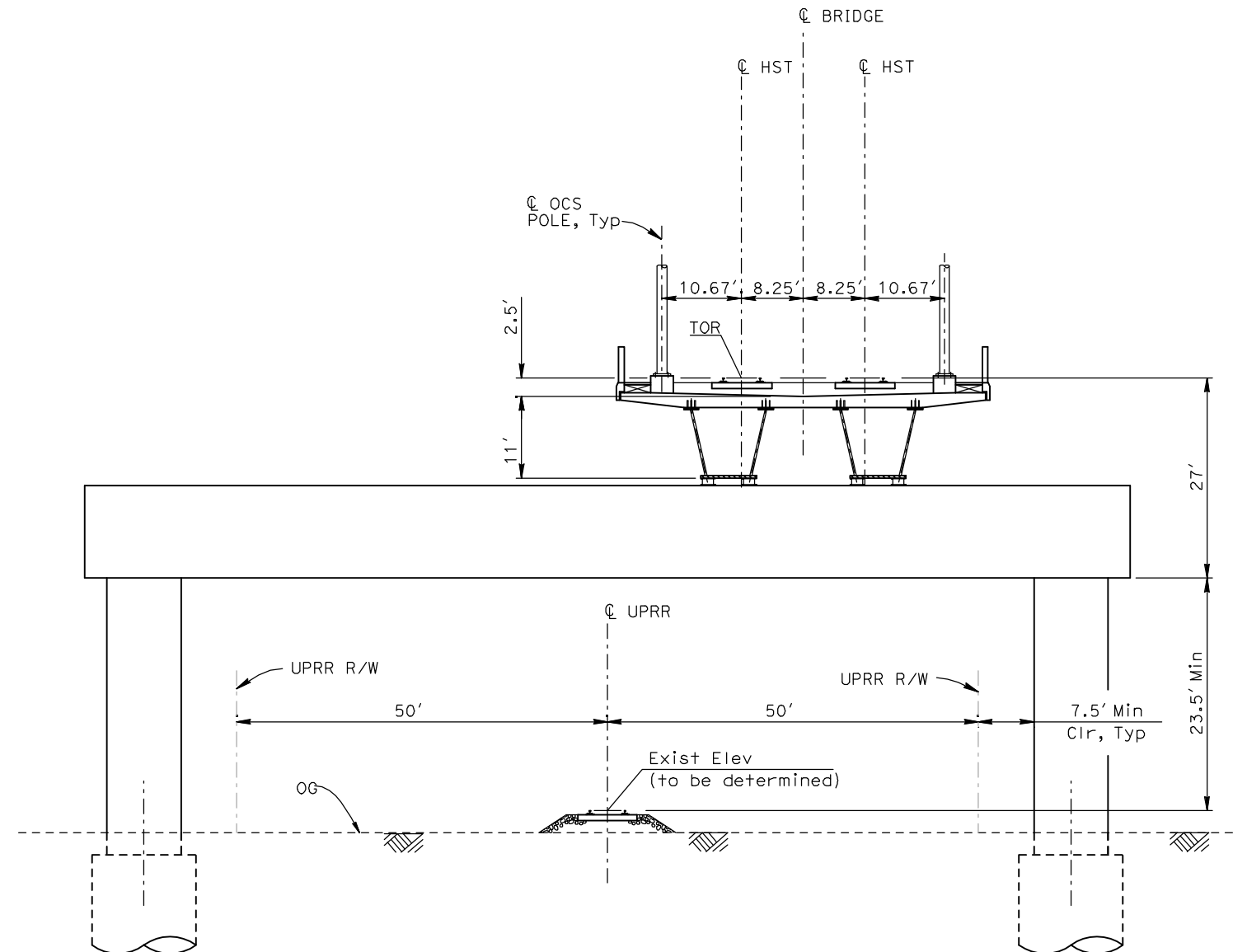
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T3005-A
SCALE
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EL4 - DOUBLE TRACK ELEVATED CROSSING SR99



EL5 - DOUBLE TRACK ELEVATED CROSSING UPRR/BNSF

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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DESIGNED BY
A. SHIELDS
DRAWN BY
C. VALADAO
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

**RECORD SET
15% DESIGN
SUBMITTAL**

**NOT FOR
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Sacramento, CA 95811
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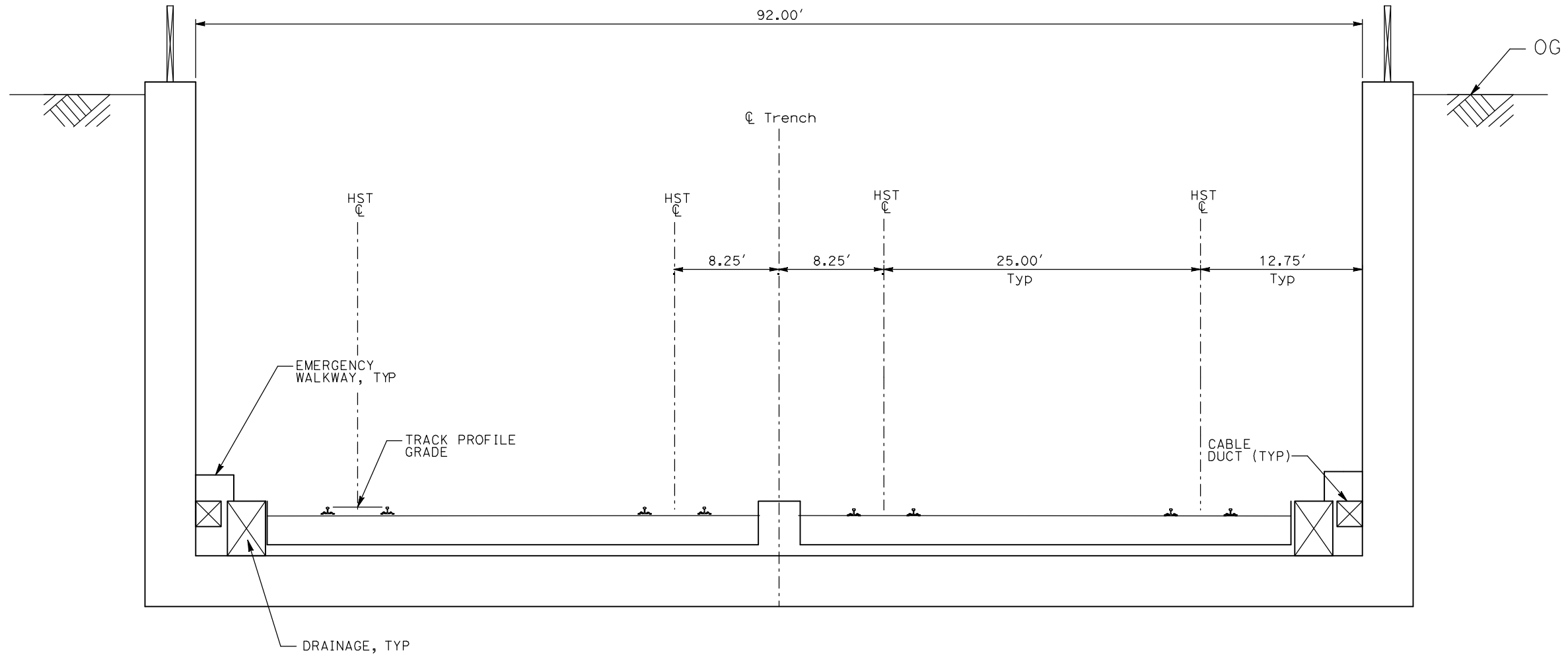
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

TYPICAL SECTIONS
SHEET 6 OF 17

CONTRACT NO.
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DRAWING NO.
T3006-A
SCALE
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TR1 - 4 TRACK TRENCH STATION APPROACH

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY
A. SHIELDS
DRAWN BY
C. VALADAO
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

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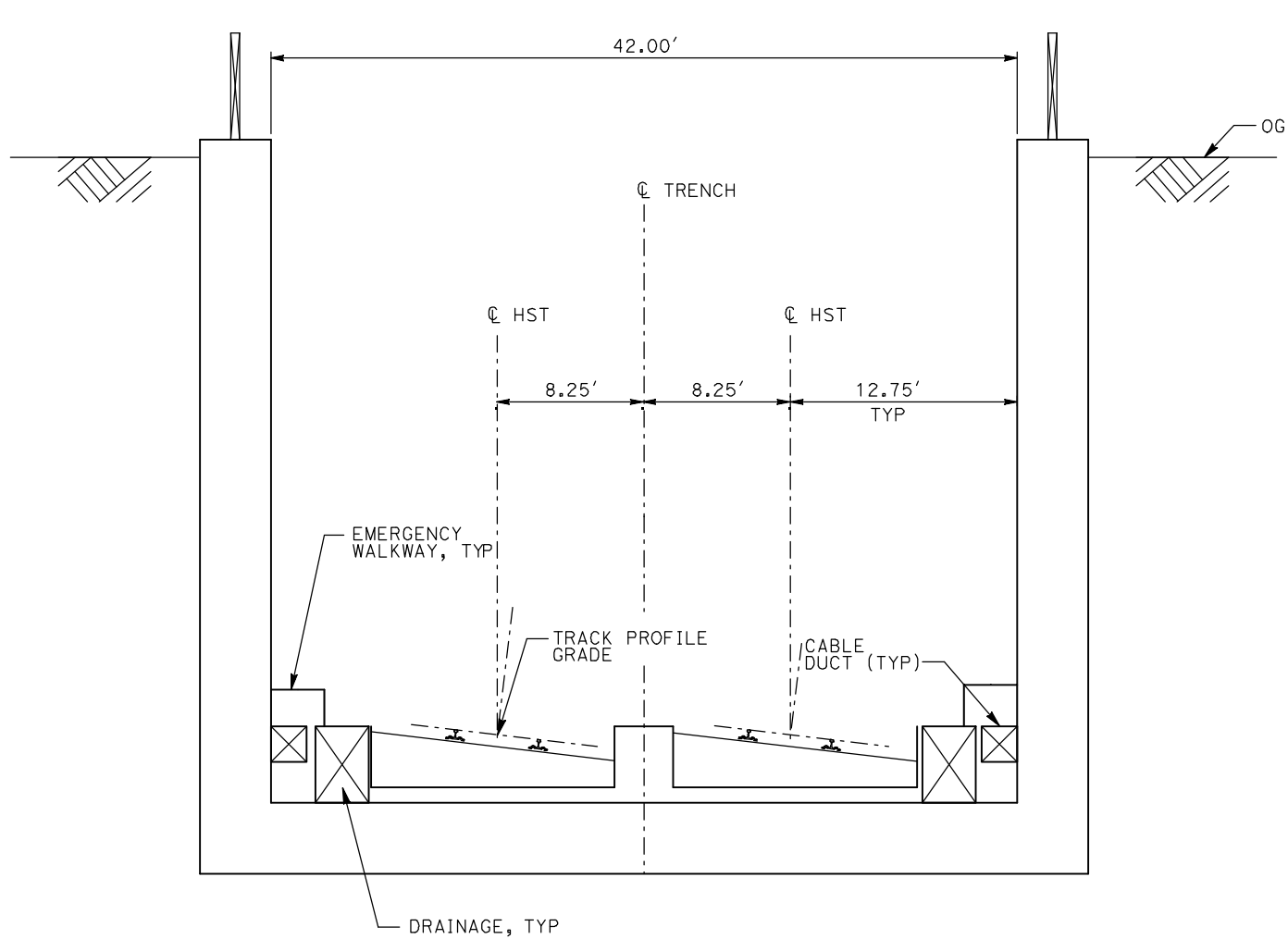
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 7 OF 17

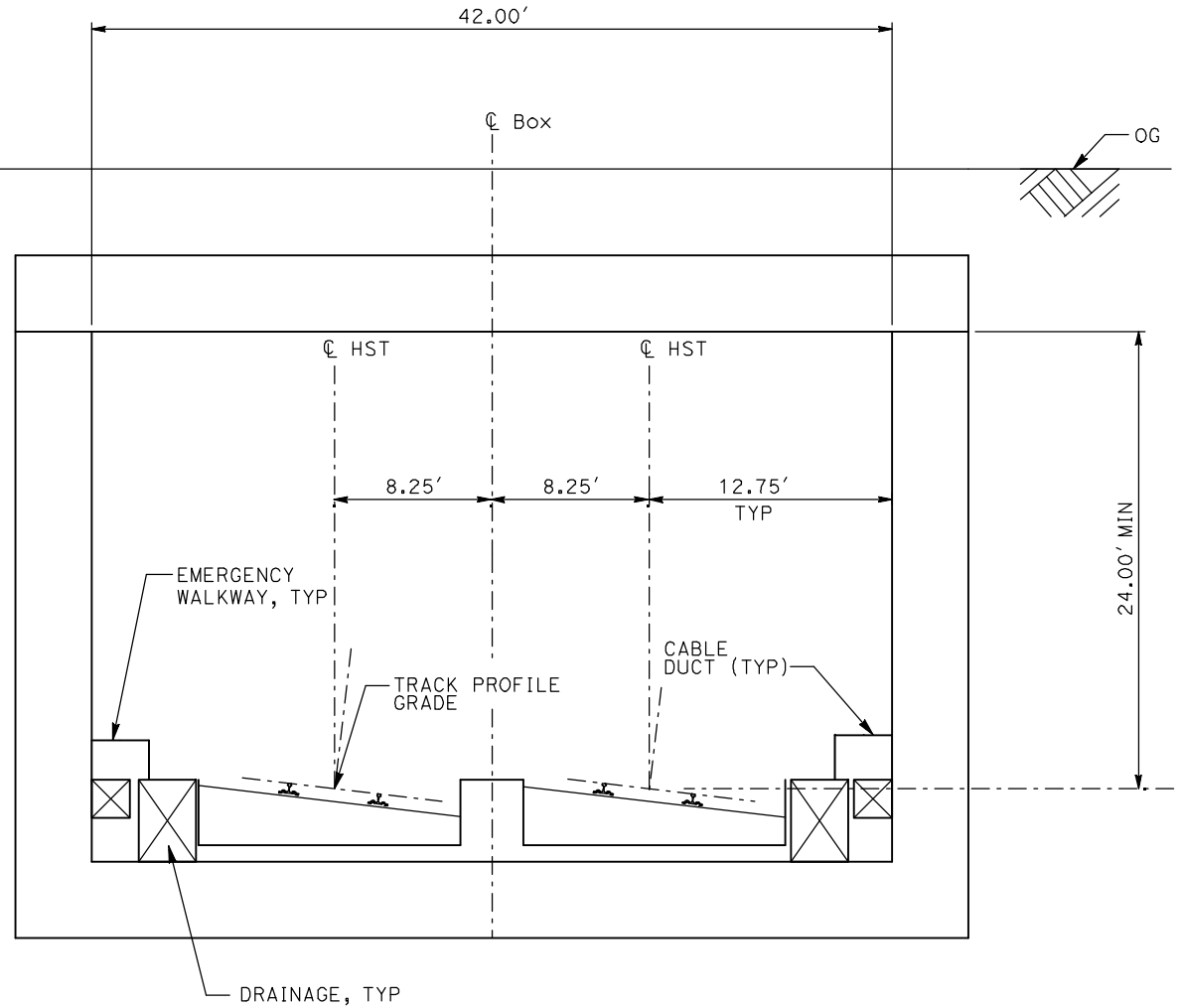
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ShieldsA



TR2 - 2 TRACK TRENCH



CC1 - 2 TRACK CUT AND COVER CLOSED BOX

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

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DESIGNED BY
A. SHIELDS
DRAWN BY
C. VALADAO
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

**RECORD SET
15% DESIGN
SUBMITTAL**

**NOT FOR
CONSTRUCTION**

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL

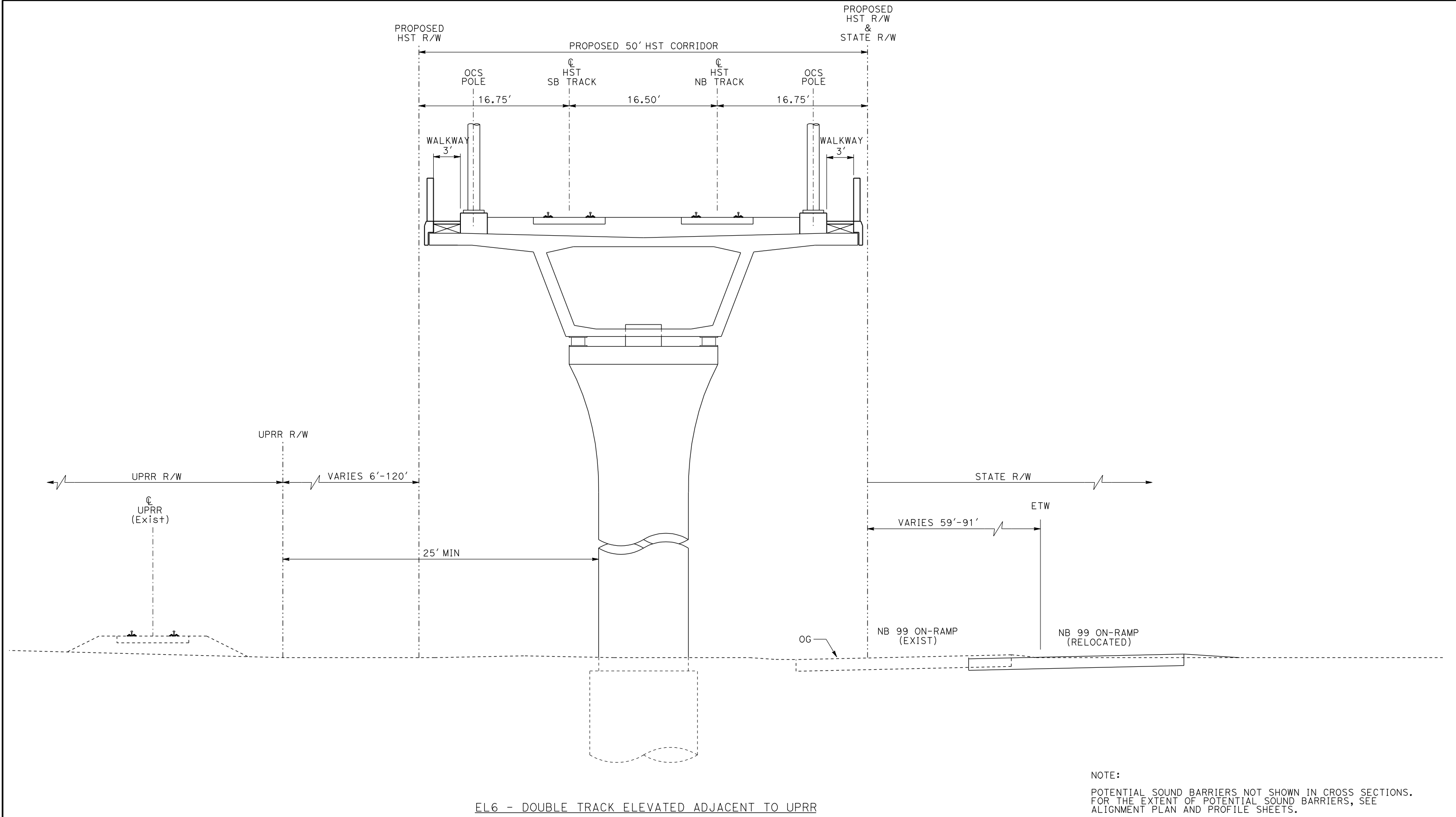


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

TYPICAL SECTIONS
SHEET 8 OF 17

CONTRACT NO.
HSR06-007
DRAWING NO.
T3008-A
SCALE
NO SCALE
SHEET NO.
OF ###



NOTE:
POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.
FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE
ALIGNMENT PLAN AND PROFILE SHEETS.

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|---------------------------|
| DESIGNED BY L. PROCTOR |
| DRAWN BY S. LEONG |
| CHECKED BY V. CHIO |
| IN CHARGE J. VALSECCHI |
| DATE JULY 2011 |

RECORD SET
15% DESIGN
SUBMITTAL

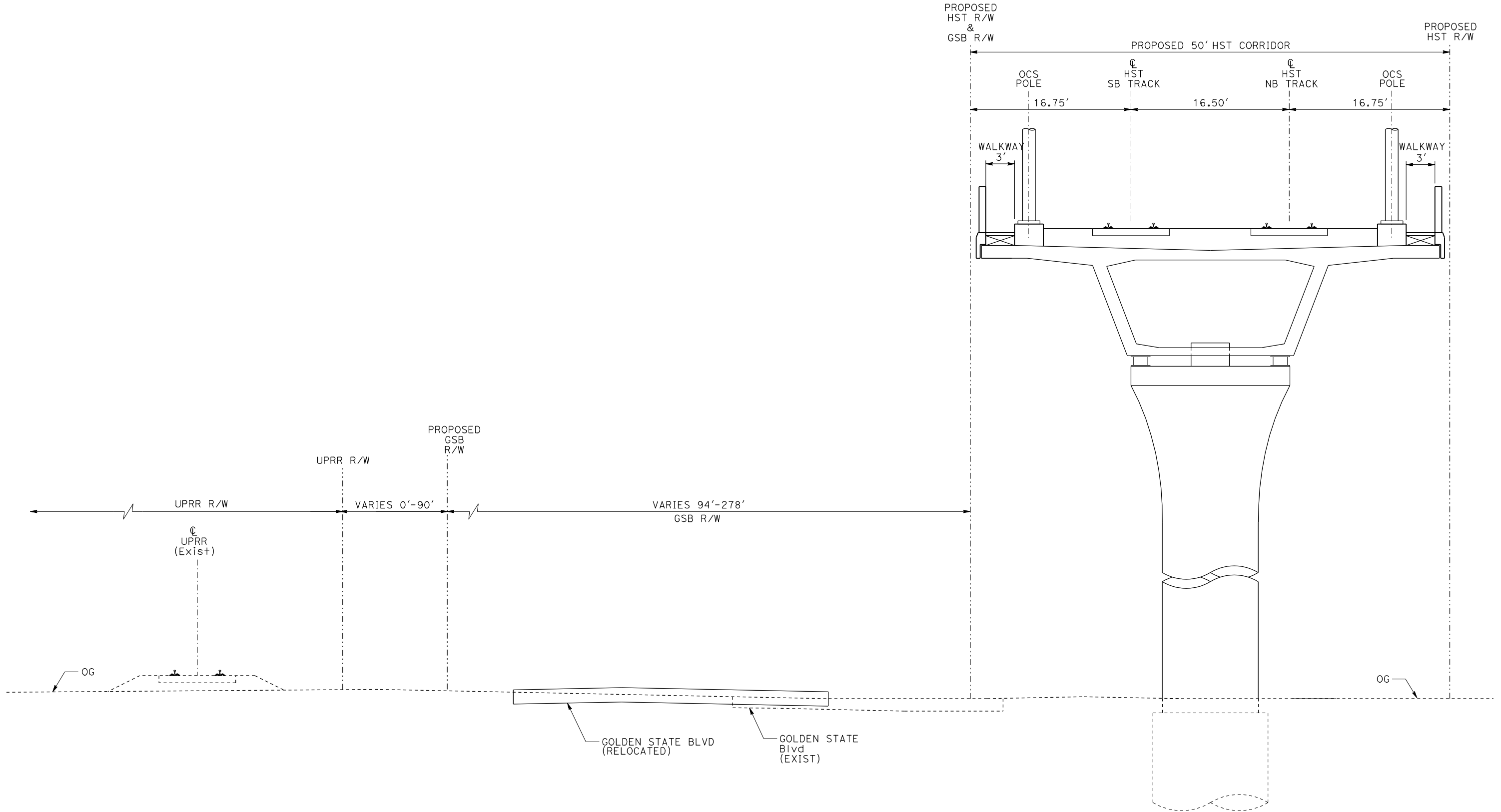
NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 9 OF 17

| |
|---------------------------|
| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3009-A |
| SCALE NO SCALE |
| SHEET NO. |



EL7 - DOUBLE TRACK ELEVATED ADJACENT TO GOLDEN STATE BOULEVARD

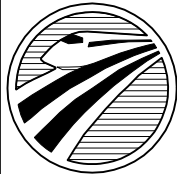
NOTE:
POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.
FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE
ALIGNMENT PLAN AND PROFILE SHEETS.

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| REV | DATE | BY | CHK | APP | DESCRIPTION |

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|---------------------------|
| DESIGNED BY L. PROCTOR |
| DRAWN BY S. LEONG |
| CHECKED BY V. CHIO |
| IN CHARGE J. VALSECCHI |
| DATE JULY 2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

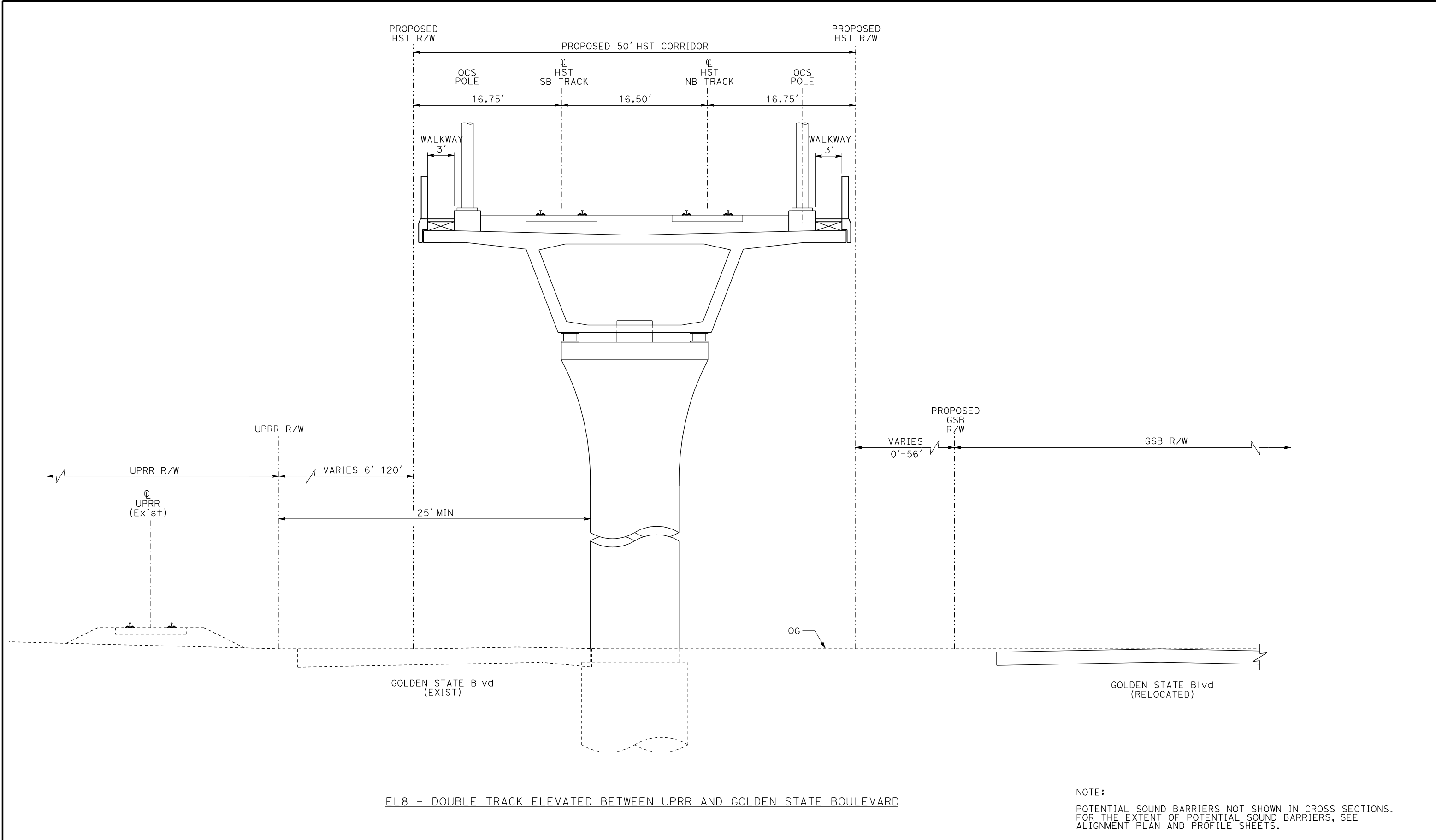



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 10 OF 17

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3010-A |
| SCALE NO SCALE |
| SHEET NO. |



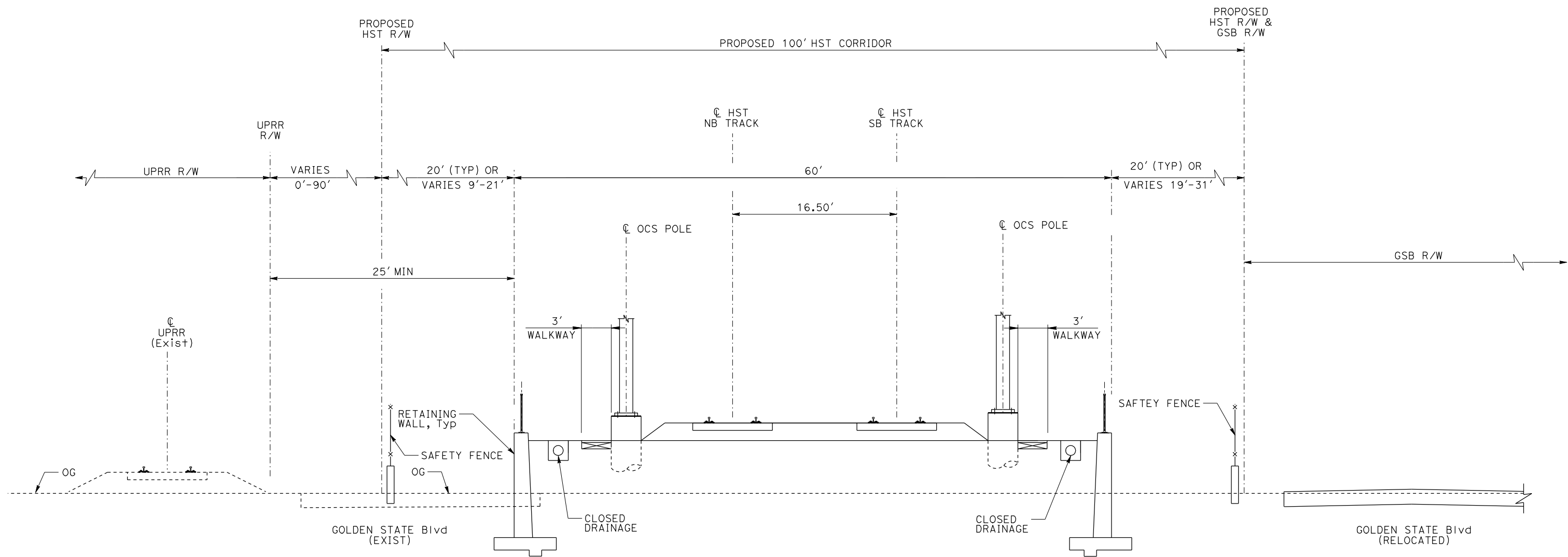
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| | | | | | DESIGNED BY L. PROCTOR | RECORD SET 15% DESIGN SUBMITTAL | AECOM Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811 |  | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO | CONTRACT NO. HSR06-007 |
| | | | | | DRAWN BY S. LEONG | | | | | DRAWING NO. T3011-A |
| | | | | | CHECKED BY V. CHIO | | | | | SCALE NO SCALE |
| | | | | | IN CHARGE J. VALSECCHI | | | | | SHEET NO. |
| REV | DATE | BY | CHK | APP | DESCRIPTION | DATE JULY 2011 | | | | |

NOTE:
POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.
FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE
ALIGNMENT PLAN AND PROFILE SHEETS.

TYPICAL SECTIONS
SHEET 11 OF 17

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DGN FILE => MF-T-3011-A1-E1R.dgn

DATE PLOTTED => 21-JUL-2011
TIME PLOTTED => 12:45



RF3 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

NOTE:

POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.
FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE
ALIGNMENT PLAN AND PROFILE SHEETS.

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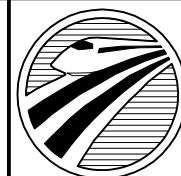
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| DESIGNED BY L. PROCTOR |
| DRAWN BY S. LEONG |
| CHECKED BY V. CHIO |
| IN CHARGE J. VALSECCHI |
| DATE JULY 2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2MHILL

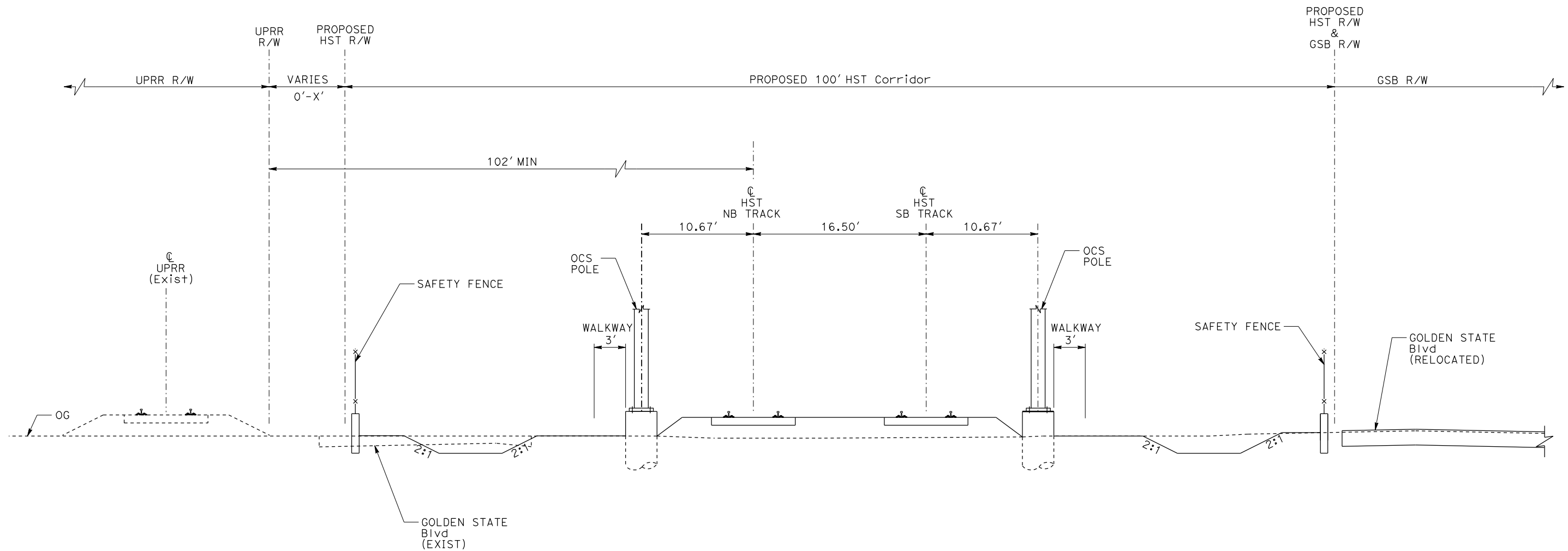


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTION
SHEET 12 OF 17

| |
|---------------------------|
| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3012-A |
| SCALE NO SCALE |
| SHEET NO. |



AG6 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

NOTE:

POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.
FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE
ALIGNMENT PLAN AND PROFILE SHEETS.

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| DESIGNED BY L. PROCTOR |
| DRAWN BY S. LEONG |
| CHECKED BY V. CHIO |
| IN CHARGE J. VALSECCHI |
| DATE JULY 2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



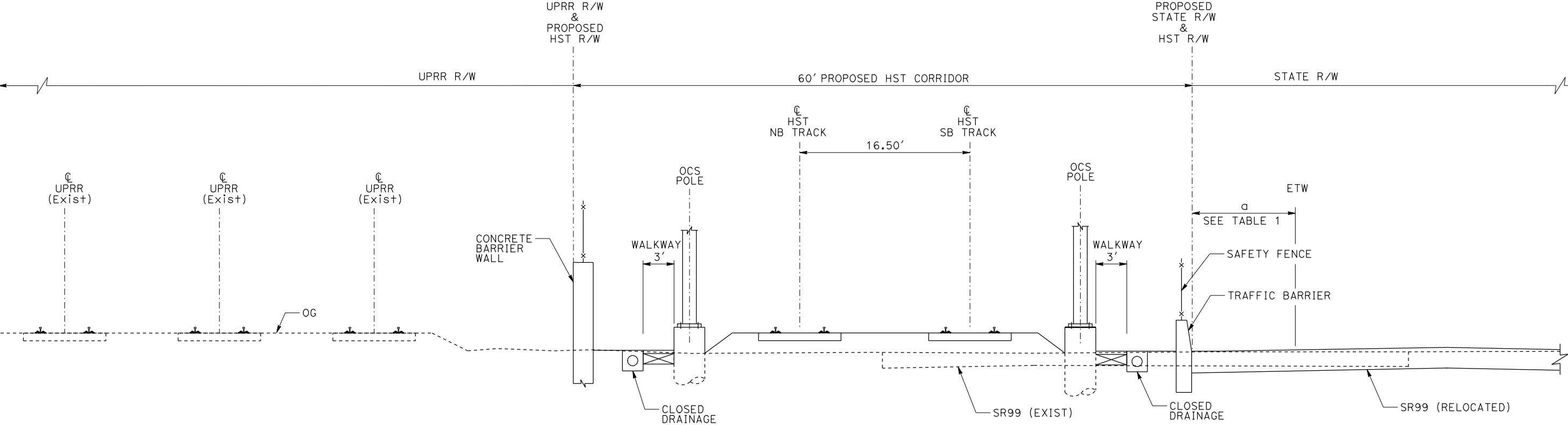
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTION
SHEET 13 OF 17

| |
|---------------------------|
| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3013-A |
| SCALE NO SCALE |
| SHEET NO. |

TABLE 1

| | |
|--------------|--------------------|
| a > 30' | NO TRAFFIC BARRIER |
| 4' < a < 30' | TRAFFIC BARRIER |



AG7 - DOUBLE TRACK BETWEEN UPRR AND STATE ROUTE 99

NOTE:
POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS.
FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE
ALIGNMENT PLAN AND PROFILE SHEETS.

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| | | | | | | DESIGNED BY L. PROCTOR |
| | | | | | | DRAWN BY S. LEONG |
| | | | | | | CHECKED BY V. CHIO |
| | | | | | | IN CHARGE J. VALSECCHI |
| | | | | | | DATE JULY 2011 |
| REV | DATE | BY | CHK | APP | | DESCRIPTION |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



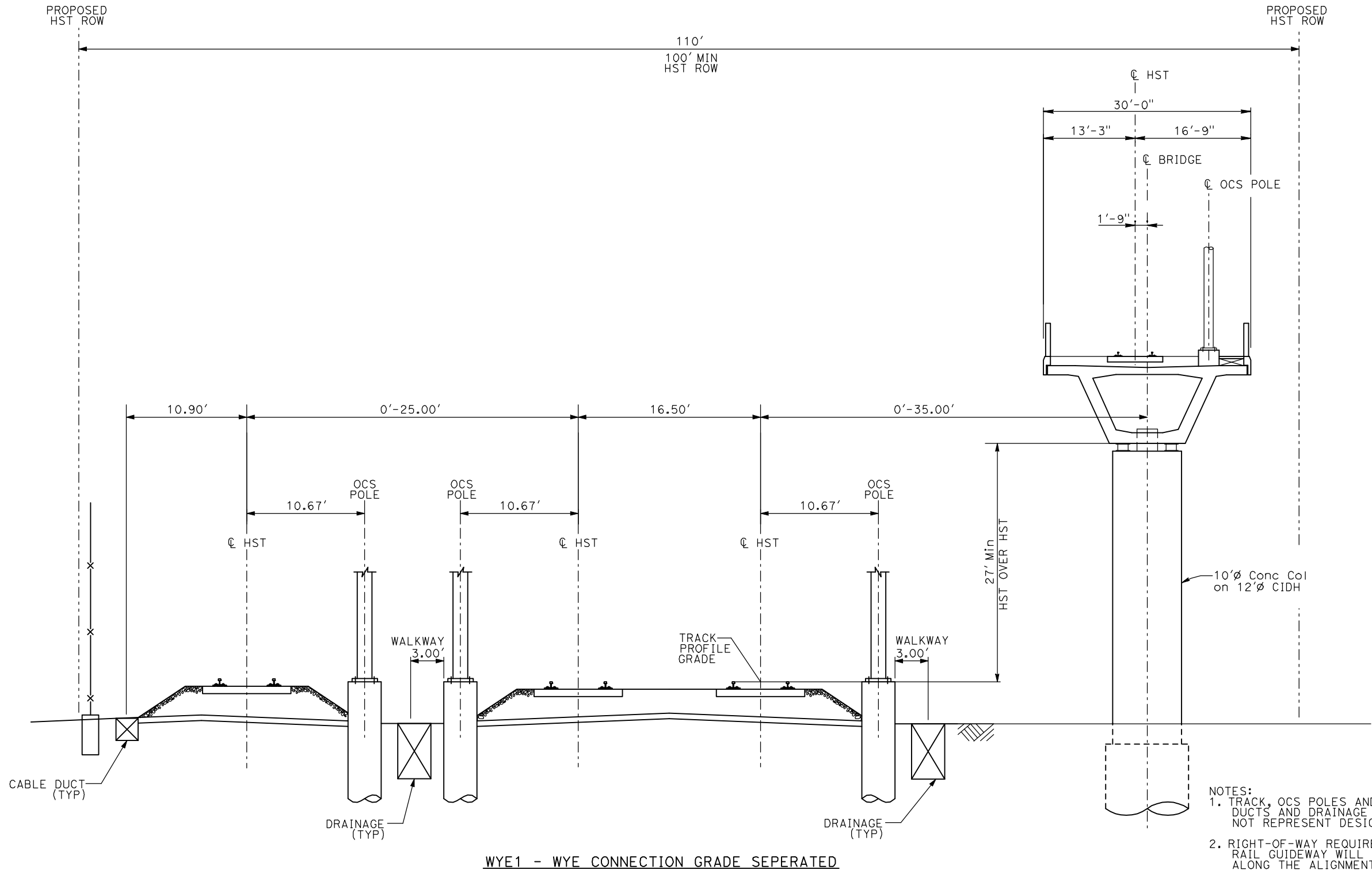
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTION
SHEET 14 OF 17

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3014-A |
| SCALE NO SCALE |
| SHEET NO. |

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ShieldsA



WYE1 - WYE CONNECTION GRADE SEPERATED

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY
A. SHIELDS
DRAWN BY
C. VALADAO
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

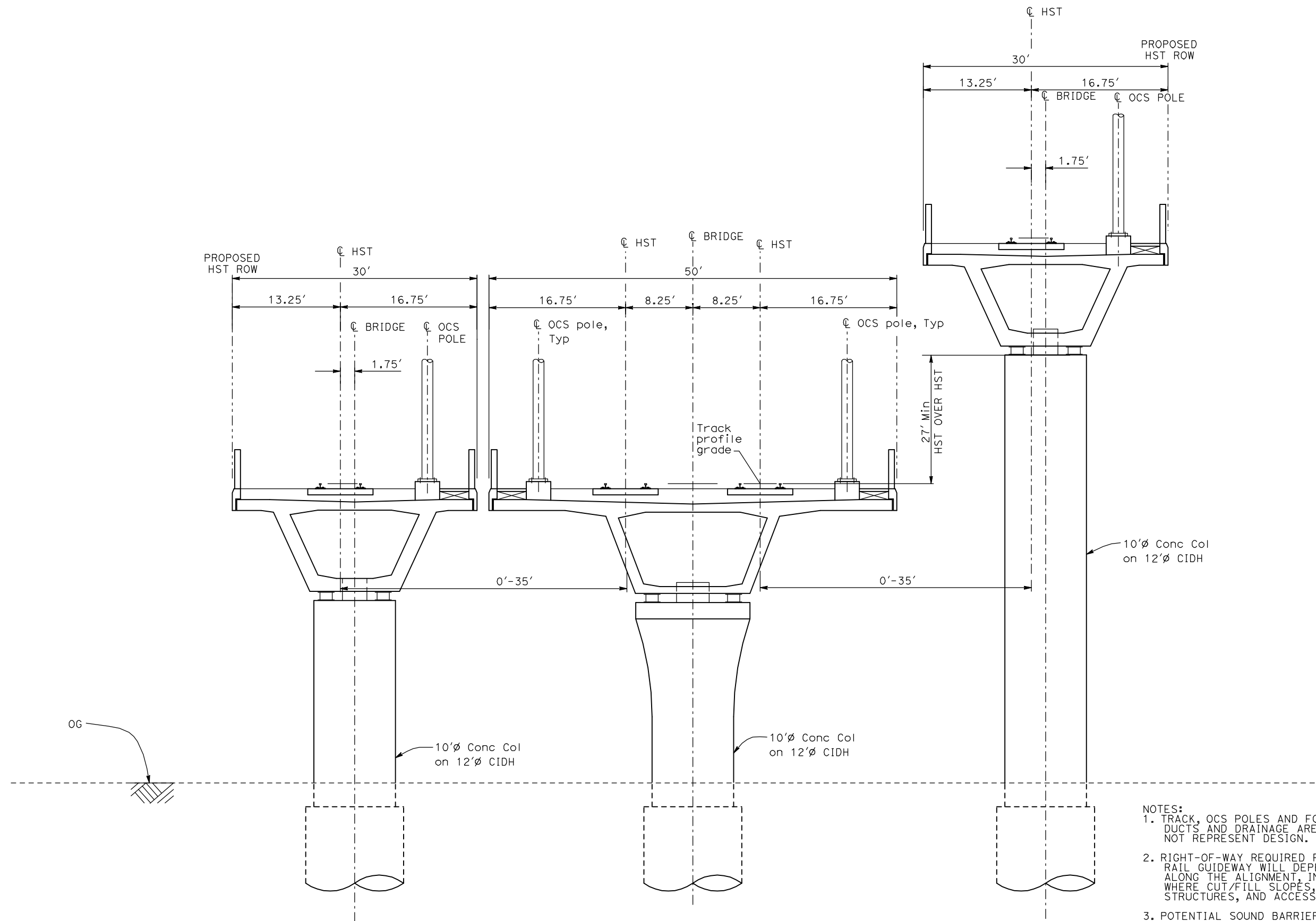


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

TYPICAL SECTIONS
SHEET 15 OF 17

CONTRACT NO.
HSR06-007
DRAWING NO.
T3015-A
SCALE
NO SCALE
SHEET NO.
OF ###

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- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
 3. POTENTIAL SOUND BARRIERS NOT SHOWN IN CROSS SECTIONS. FOR THE EXTENT OF POTENTIAL SOUND BARRIERS, SEE ALIGNMENT PLAN AND PROFILE SHEETS.

WYE2 - WYE CONNECTION GRADE SEPERATED

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY
A. SHIELDS
DRAWN BY
C. VALADAO
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



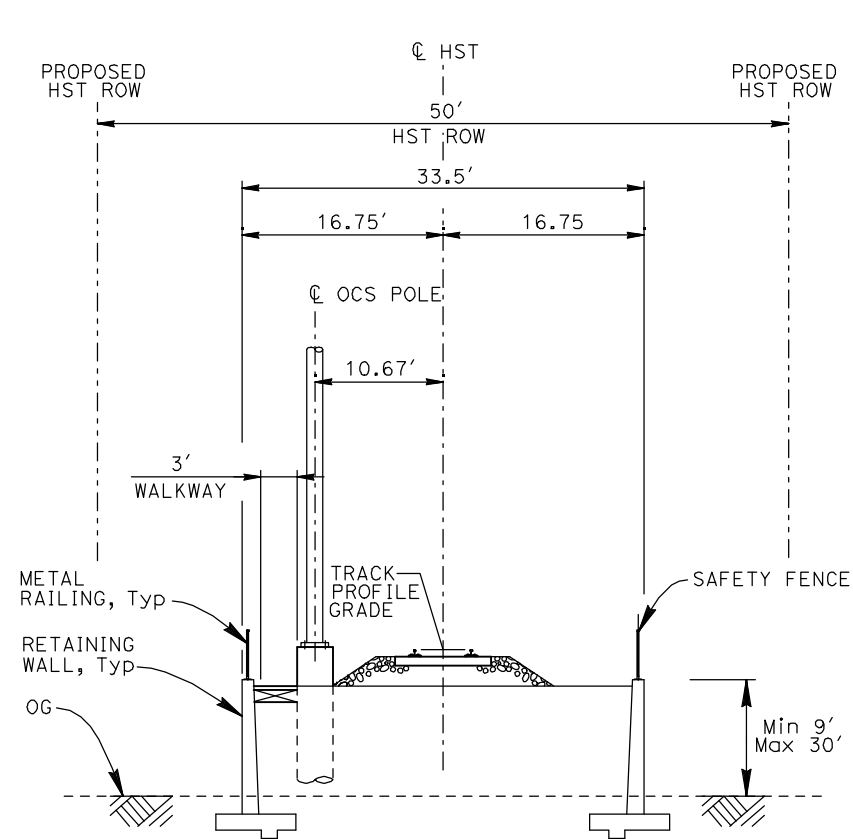
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

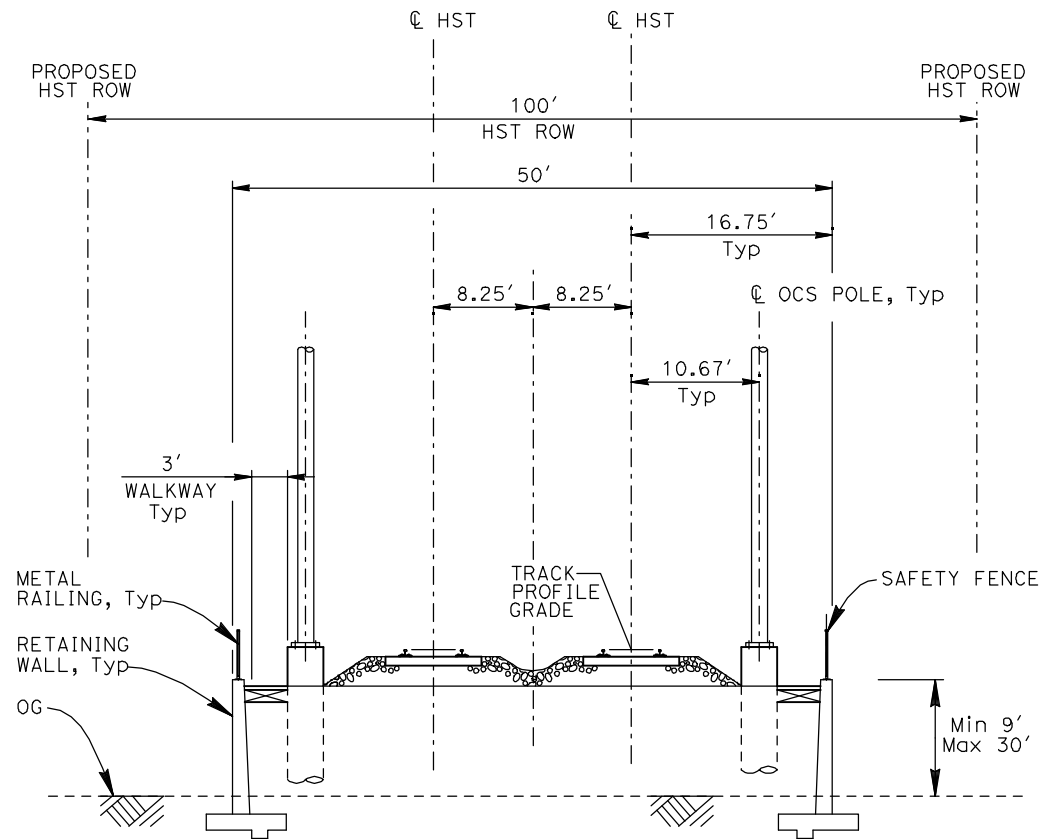
TYPICAL SECTIONS
SHEET 16 OF 17

CONTRACT NO.
HSR06-007
DRAWING NO.
T3016-A
SCALE
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SHEET NO.
OF ###

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RF1 - SINGLE TRACK RETAINED FILL



RF2 - DOUBLE TRACK RETAINED FILL

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
 2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.
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| DESIGNED BY A. SHIELDS |
| DRAWN BY C. VALADAO |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



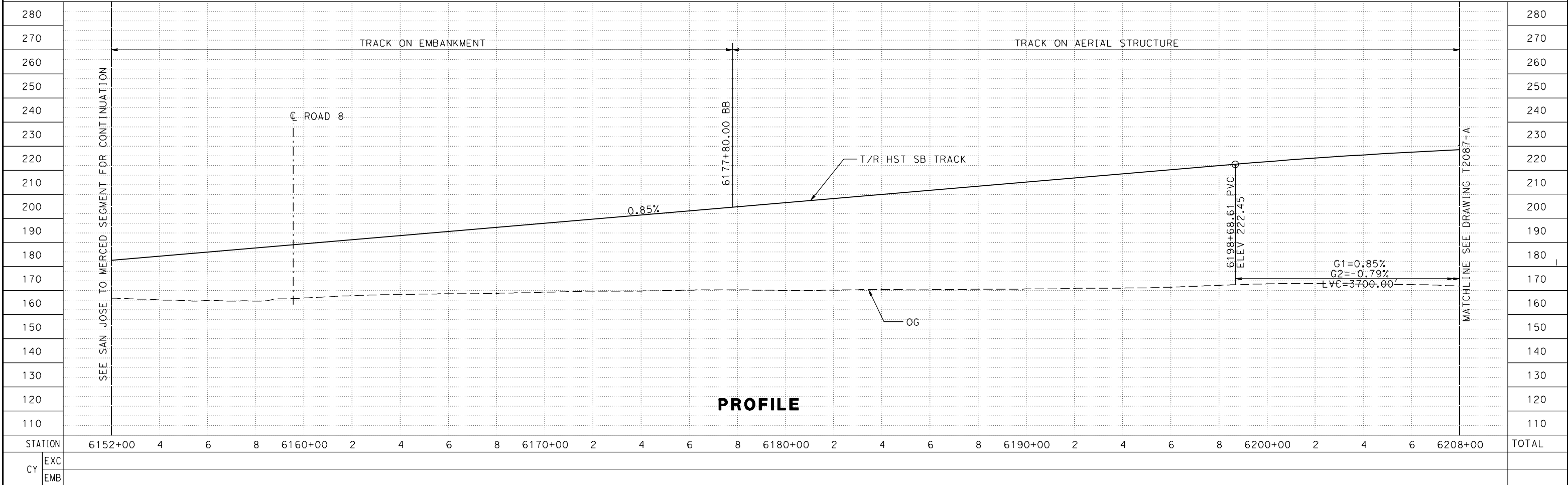
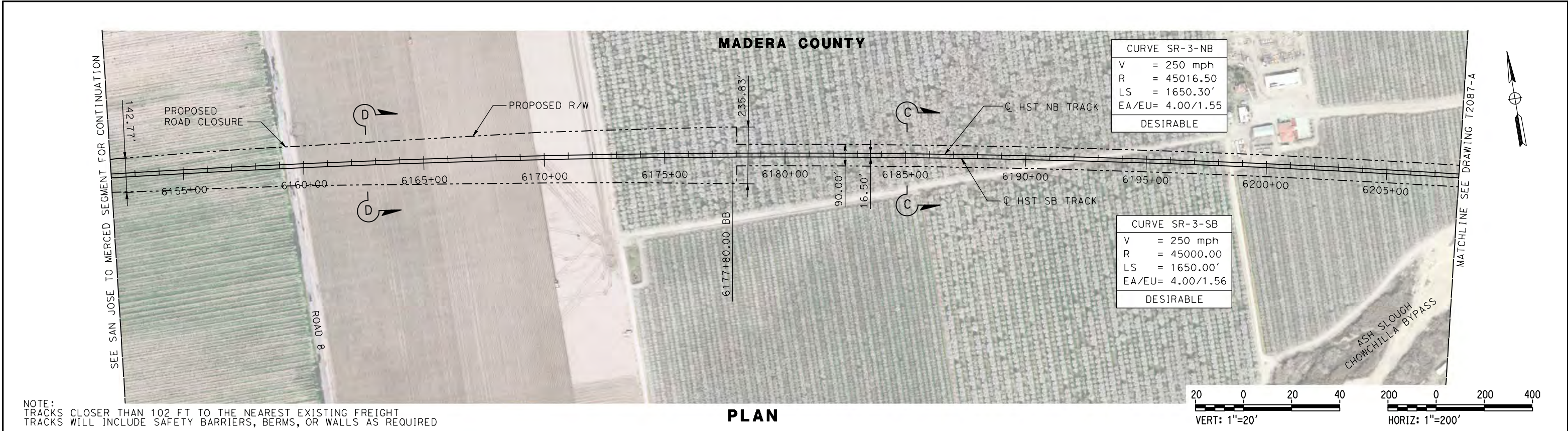
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO



TYPICAL SECTIONS
SHEET 17 OF 17

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T3017-A |
| SCALE NO SCALE |
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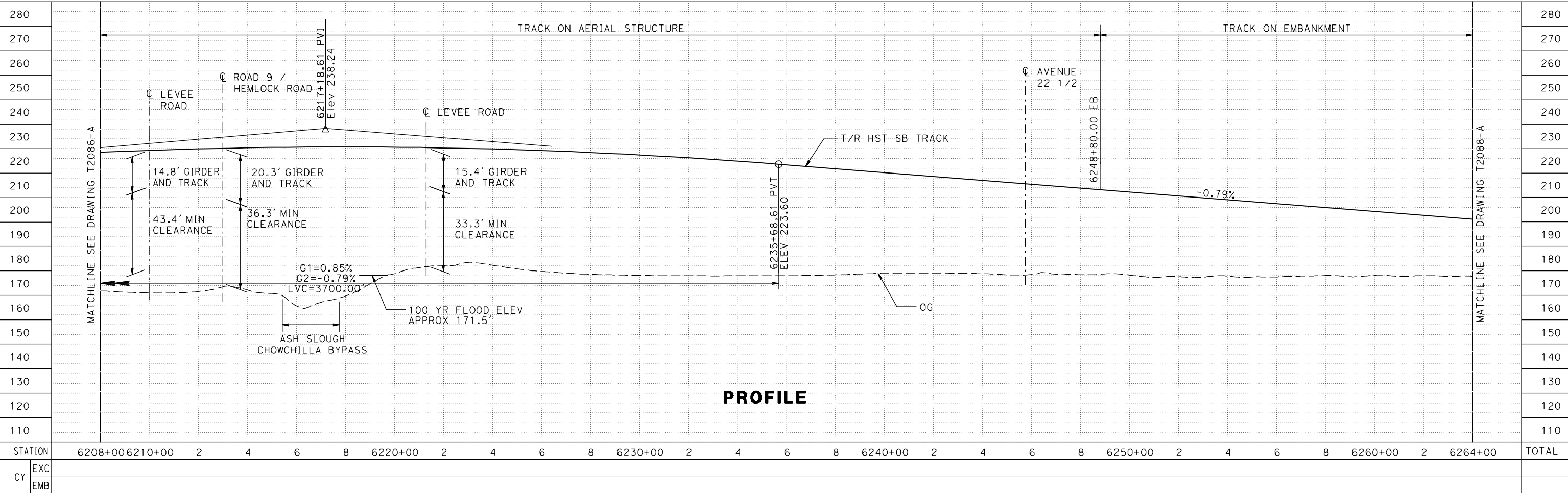
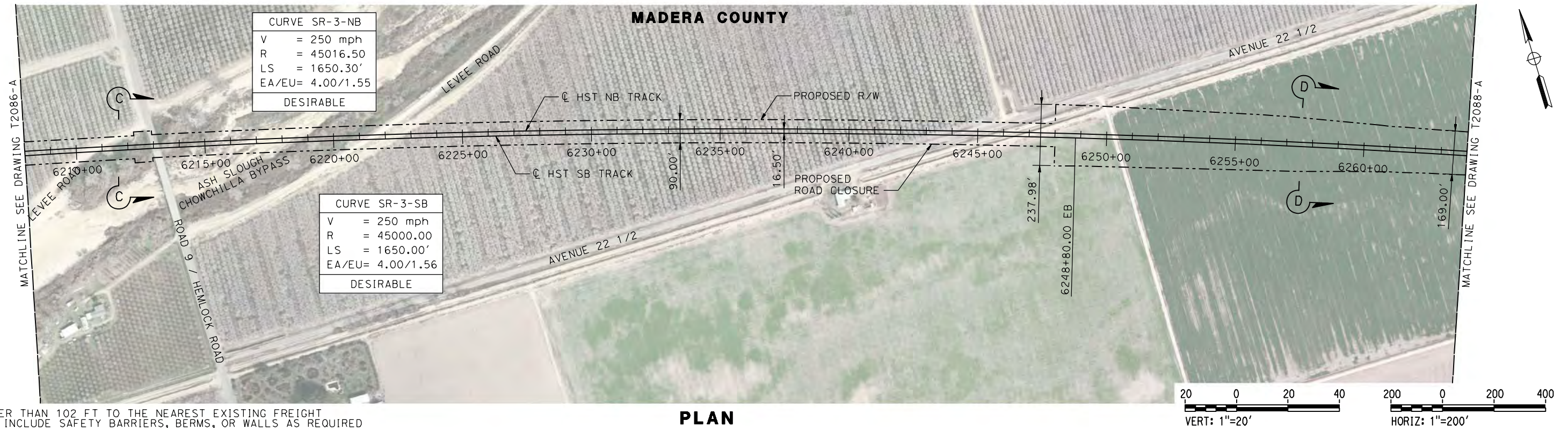
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| DESIGNED BY P. JACOBY | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY |  |  | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 24/SR152/AVENUE 21 TRACK PLAN AND PROFILE STA 6152+00 TO STA 6208+00 | CONTRACT NO. HSR08-05 |
| DRAWN BY ALBERT S. | | | | | DRAWING NO. T2086-A |
| CHECKED BY RESHMA C. | | | | | SCALE AS SHOWN |
| IN CHARGE D. WEMMER | | | | | SHEET NO. |
| DATE 4/15/2011 | | | | | |
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DESIGNED BY
P. JACOBY
DRAWN BY
ALBERT S.
CHECKED BY
RESHMA C.
IN CHARGE
D. WEMMER
DATE
4/15/2011

**15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY**

**NOT FOR
CONSTRUCTION**

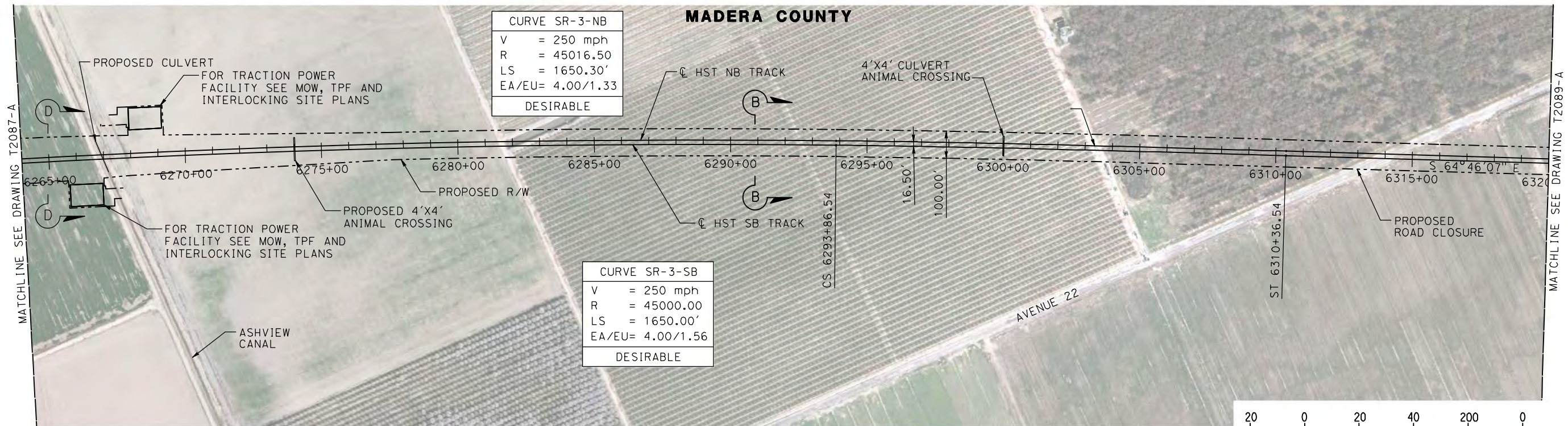


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TRACK PLAN AND PROFILE
STA 6208+00 TO STA 6264+00

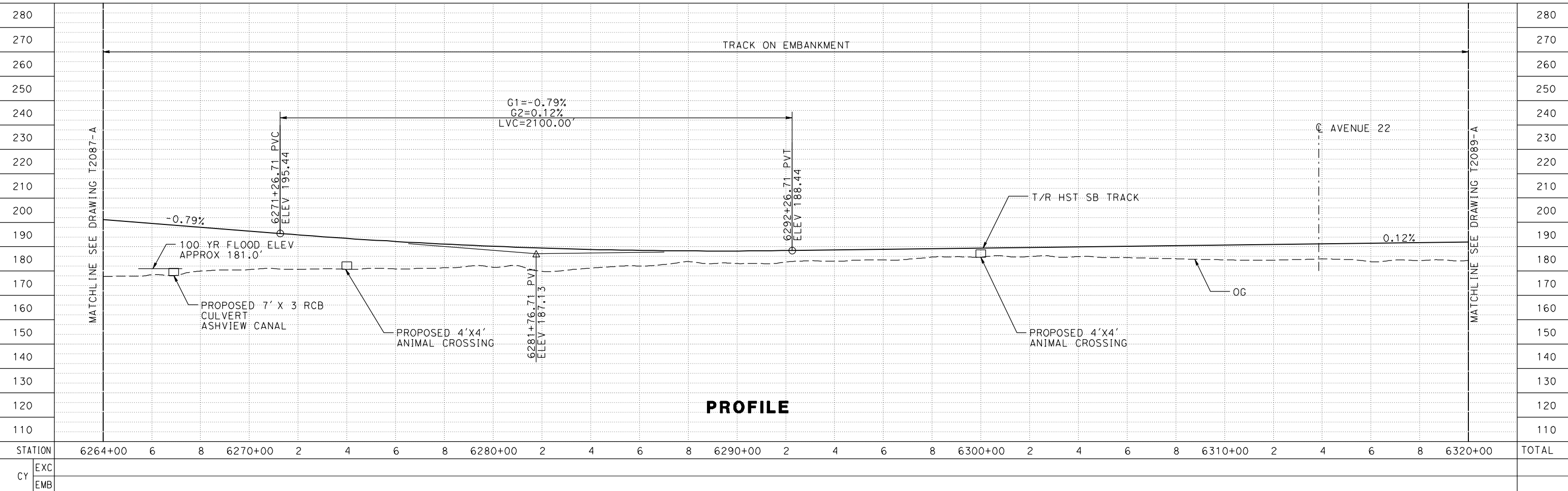
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DRAWING NO.
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PLAN



DESIGNED BY
P. JACOBY
DRAWN BY
ALBERT S.
CHECKED BY
RESHMA C.
IN CHARGE
D. WEMMER
DATE
4/15/2011

**15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY**

**NOT FOR
CONSTRUCTION**



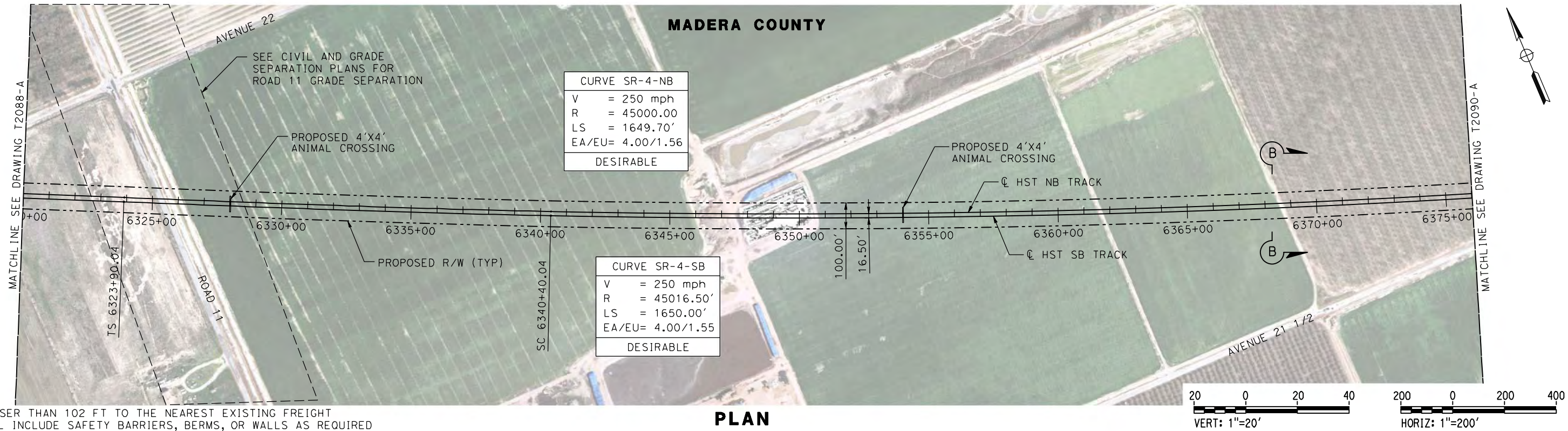
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TRACK PLAN AND PROFILE
STA 6264+00 TO STA 6320+00

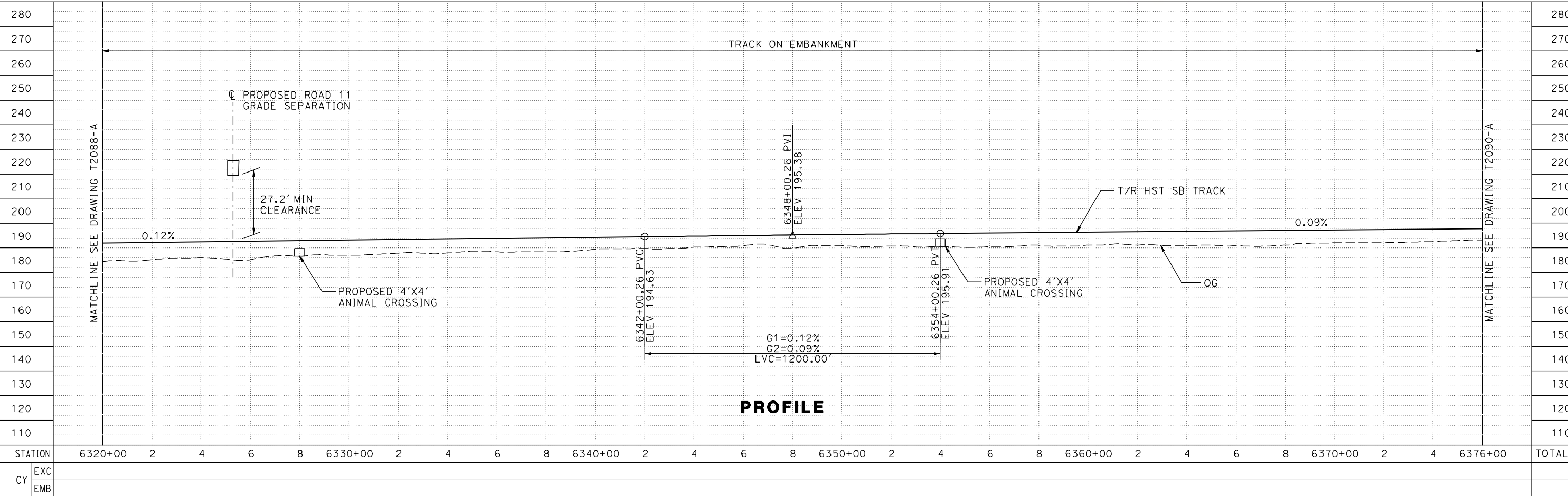
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DRAWING NO.
T2088-A
SCALE
AS SHOWN
SHEET NO.

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PLAN



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| DESIGNED BY P. JACOBY | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY |
| DRAWN BY ALBERT S. | |
| CHECKED BY RESHMA C. | |
| IN CHARGE D. WEMMER | |
| DATE 4/15/2011 | NOT FOR CONSTRUCTION |

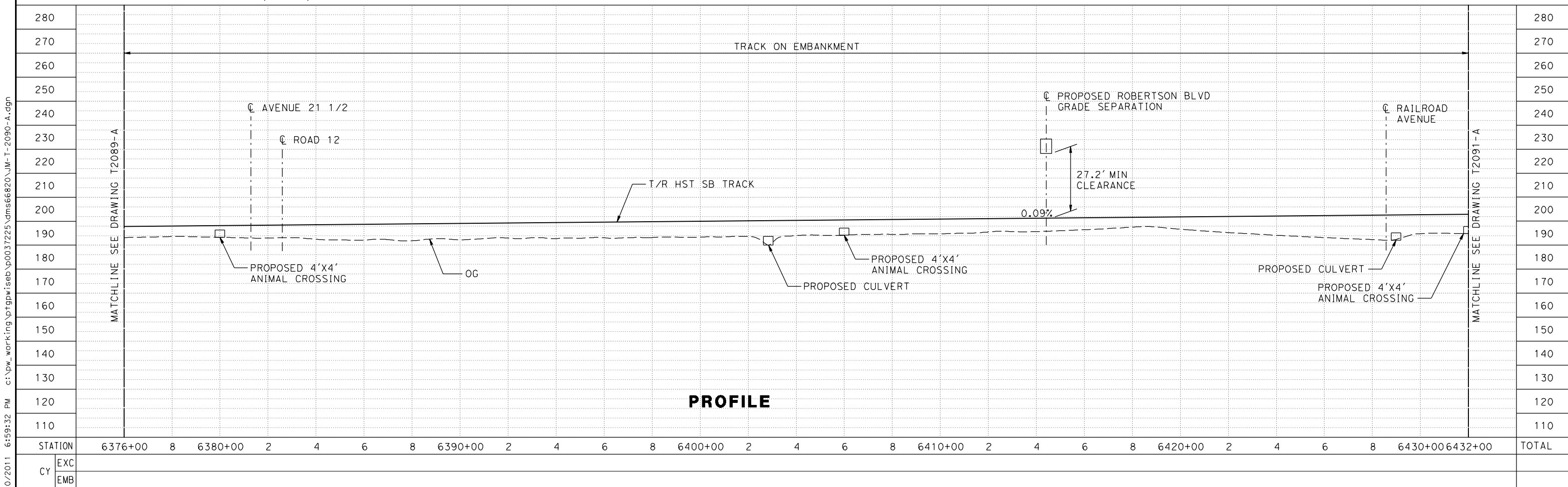
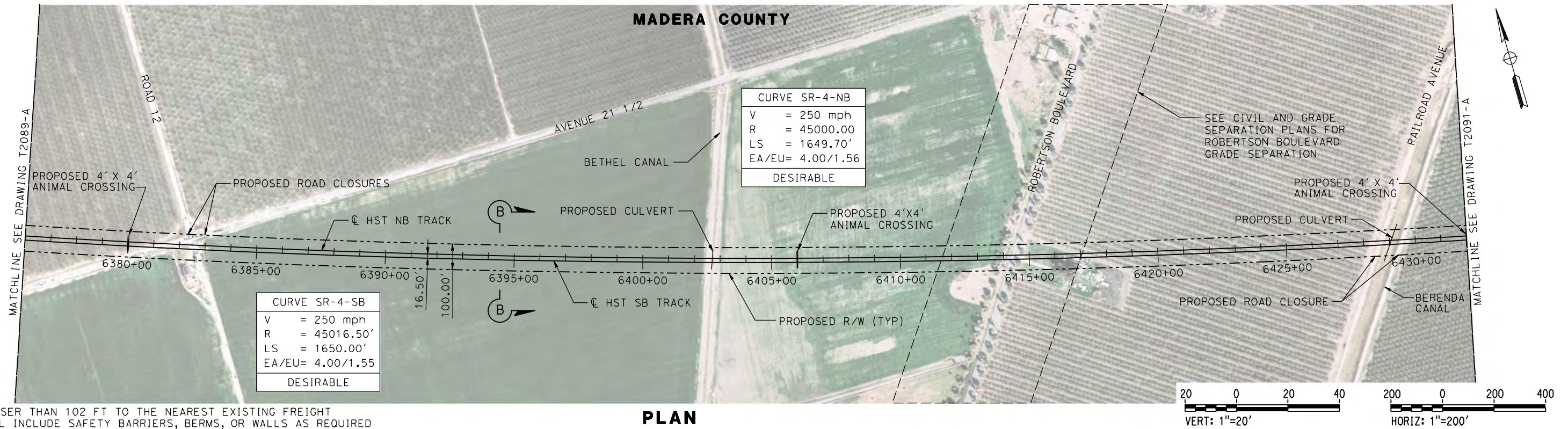




**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TRACK PLAN AND PROFILE
STA 6320+00 TO STA 6376+00

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| CONTRACT NO. HSR08-05 |
| DRAWING NO. T2089-A |
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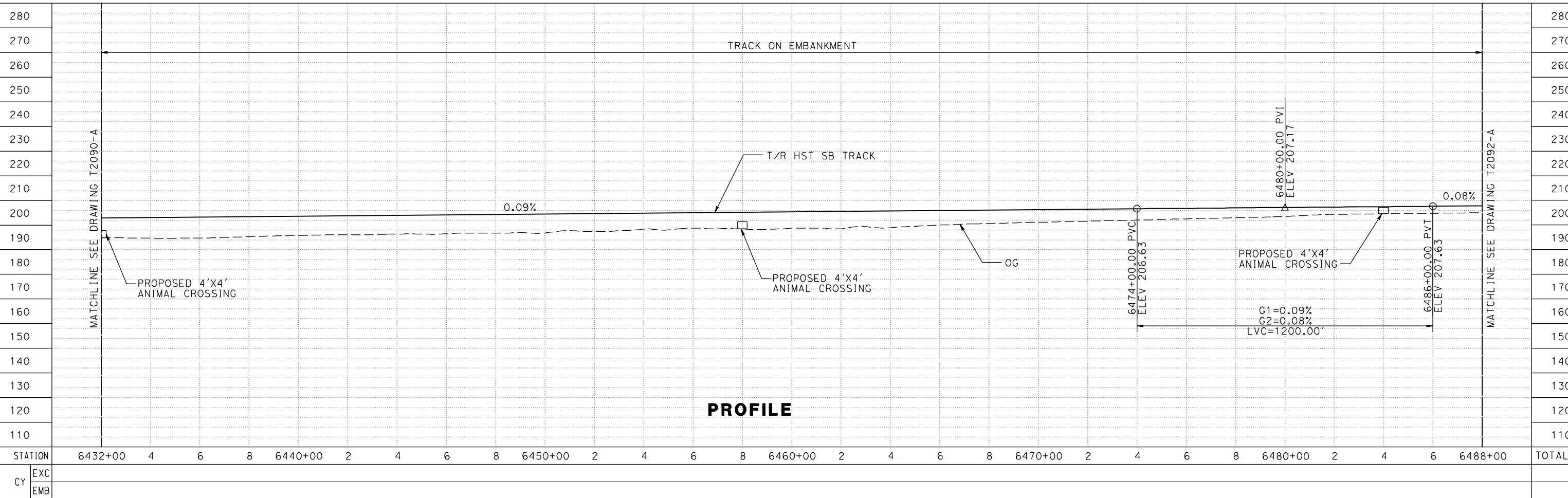
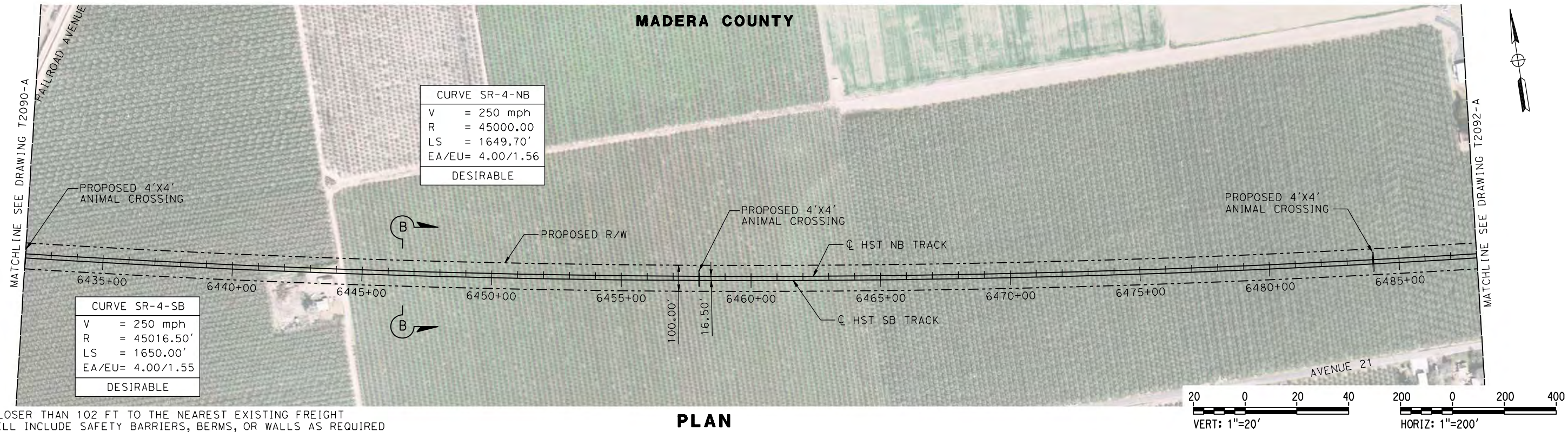
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| DESIGNED BY P. JACOBY | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY | NOT FOR CONSTRUCTION |  |  | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 24/SR152/AVENUE 21 TRACK PLAN AND PROFILE STA 6376+00 TO STA 6432+00 | CONTRACT NO. HSR08-05 |
| DRAWN BY ALBERT S. | | | | | | DRAWING NO. T2090-A |
| CHECKED BY RESHMA C. | | | | | | SCALE AS SHOWN |
| IN CHARGE D. WEMMER | | | | | | SHEET NO. |
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DESIGNED BY
P. JACOBY

DRAWN BY
ALBERT S.

CHECKED BY
RESHMA C.

IN CHARGE
D. WEMMER

DATE
4/15/2011

**15% DRAFT
SUBMITTAL
FOR INTERNAL
USE ONLY**

**NOT FOR
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TRACK PLAN AND PROFILE
STA 6432+00 TO STA 6488+00

CONTRACT NO.
HSR08-05

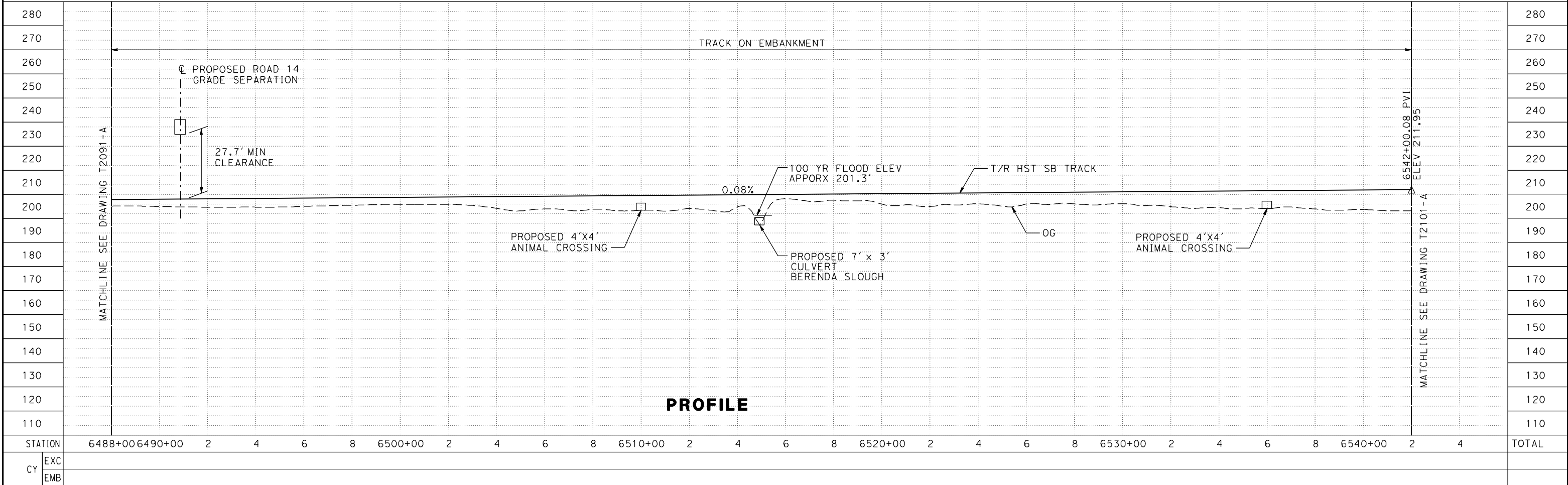
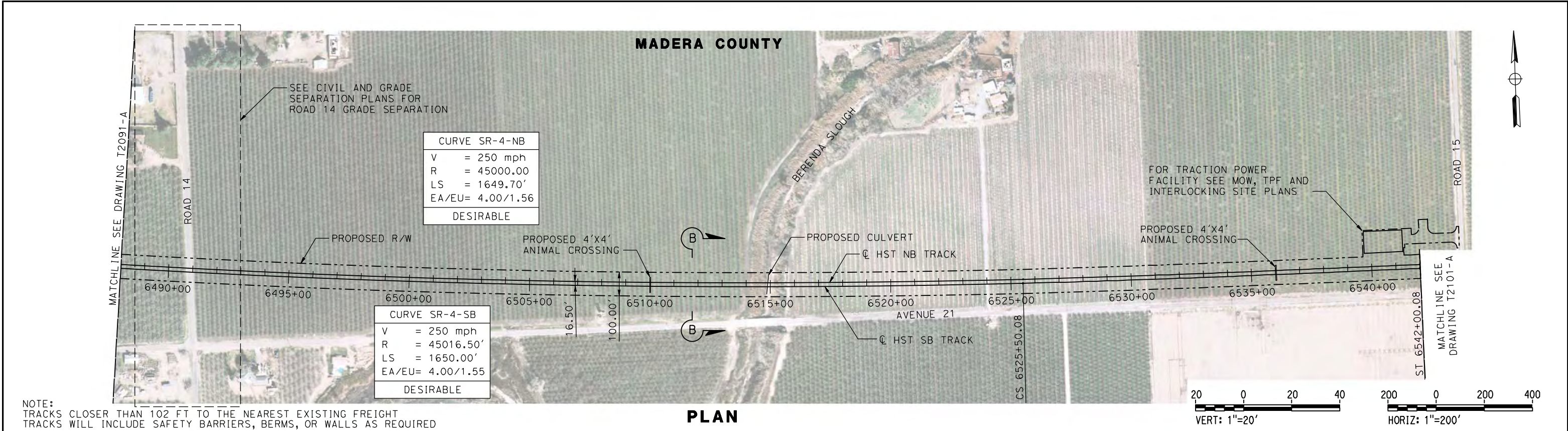
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T2091-A

SCALE
AS SHOWN

SHEET NO.

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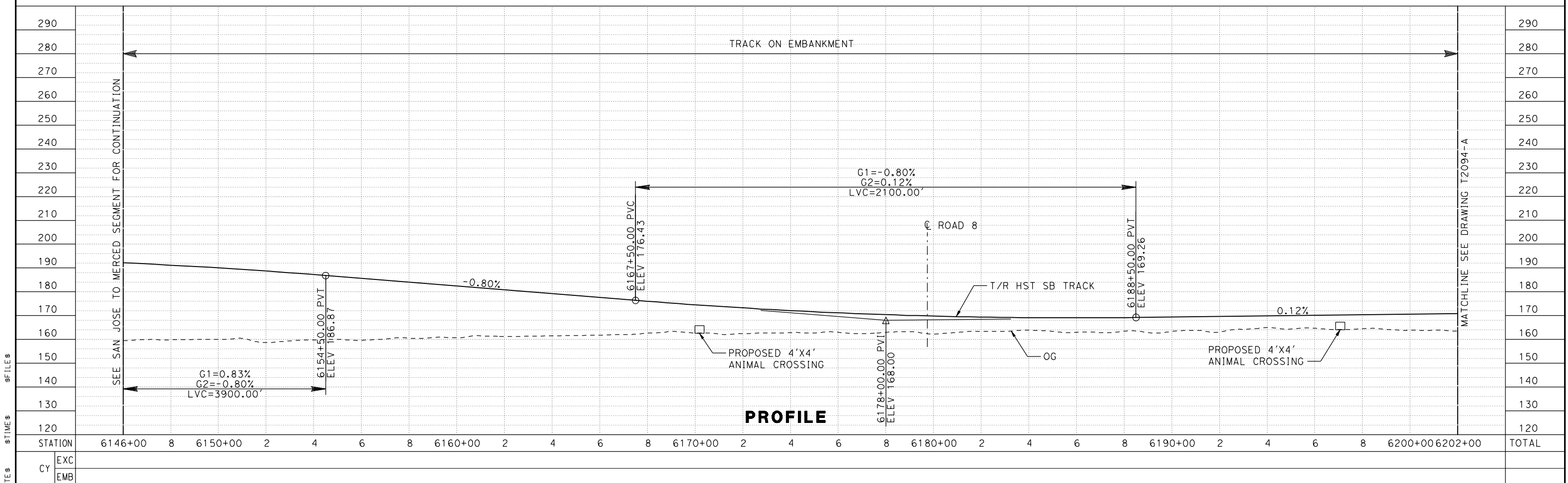
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| DRAWN BY ALBERT S. | | |
| CHECKED BY RESHMA C. | | |
| IN CHARGE D. WEMMER | | |
| DATE 4/15/2011 | | |

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE
AVENUE 24/SR152/AVENUE 21
TRACK PLAN AND PROFILE
6488+00 TO STA 6542+00

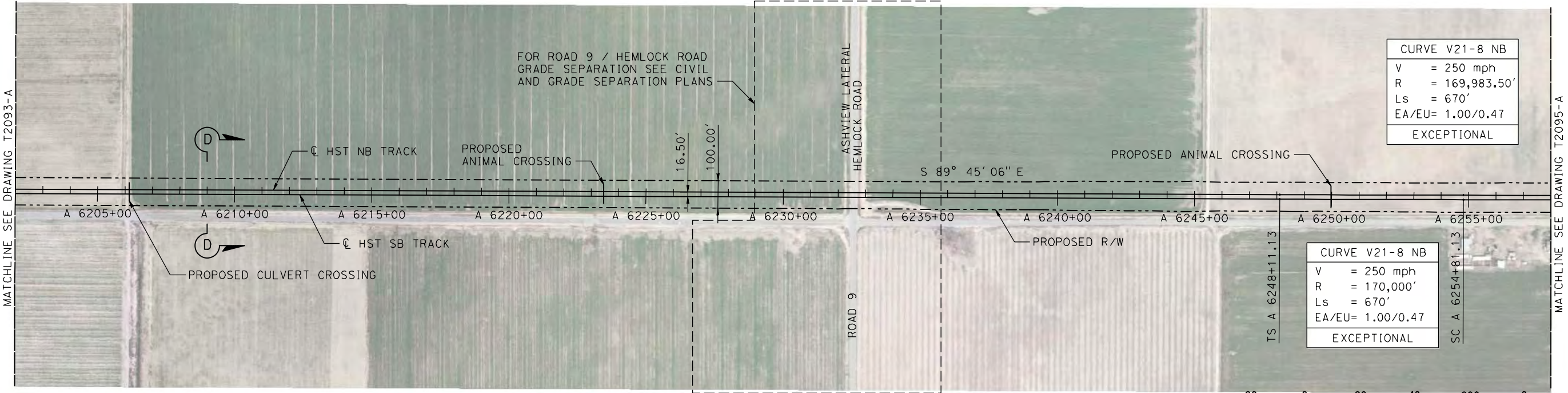
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| CONTRACT NO. HSR08-05 |
| DRAWING NO. T2092-A |
| SCALE AS SHOWN |
| SHEET NO. |

NOTE:

PLAN

[illegible]

MADERA COUNTY

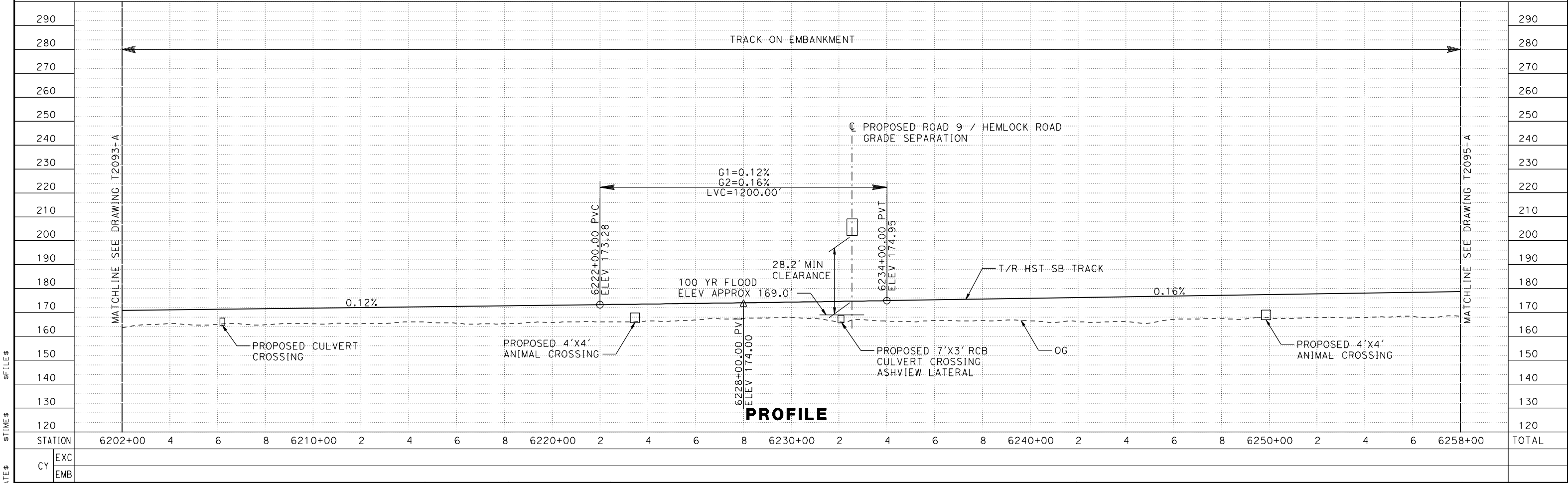


| CURVE V21-8 NB | |
|----------------|---------------|
| V | = 250 mph |
| R | = 169,983.50' |
| Ls | = 670' |
| EA/EU= | 1.00/0.47 |
| EXCEPTIONAL | |

| CURVE V21-8 NB | |
|----------------|------------|
| V | = 250 mph |
| R | = 170,000' |
| Ls | = 670' |
| EA/EU= | 1.00/0.47 |
| EXCEPTIONAL | |

NOTE:
TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT
TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED

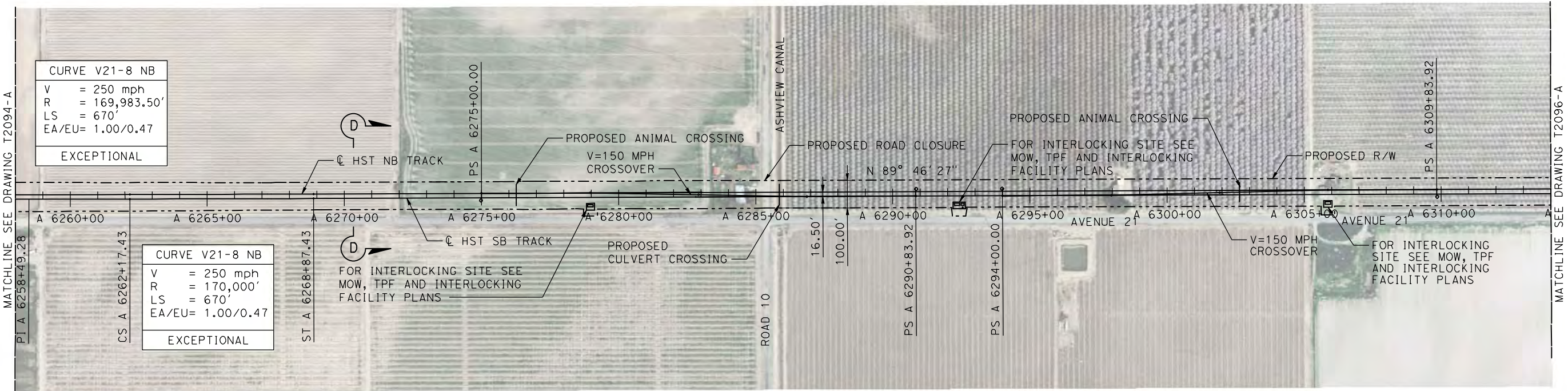
PLAN



PROFILE

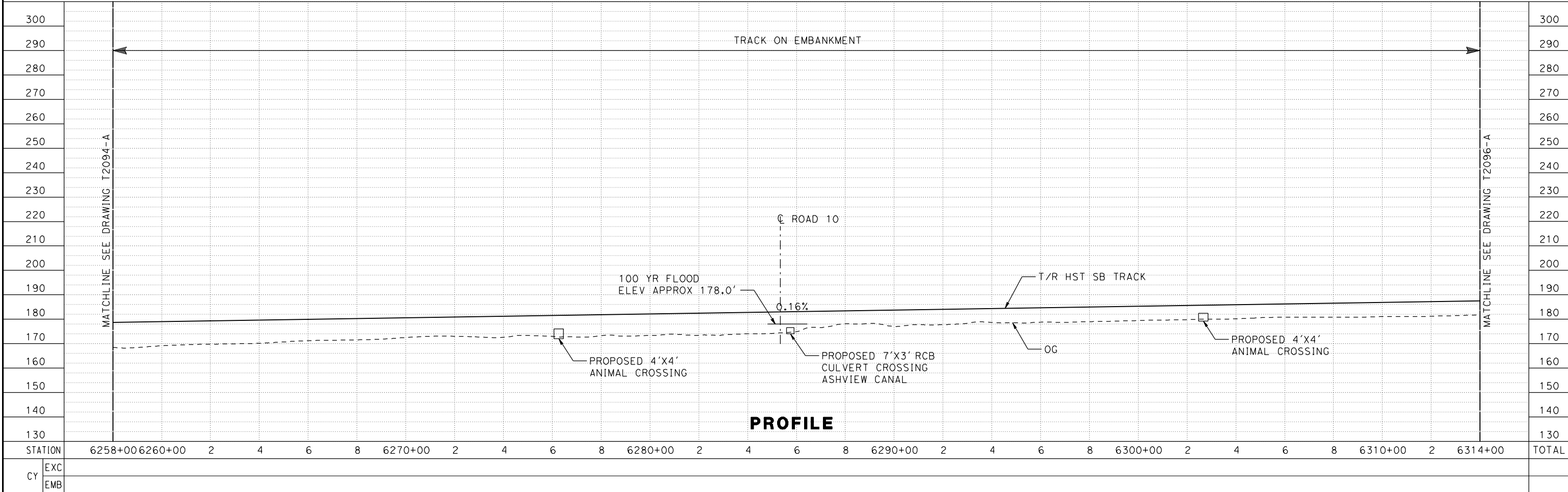
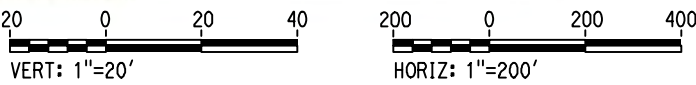
| DESIGNED BY A. GURA | | | | | | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY | | | | | | NOT FOR CONSTRUCTION | | | | | | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO | | | | | | CONTRACT NO. HSR08-05 | | | | | |
|------------------------|------|----|-----|-----|-------------|--|--|--|--|--|--|-------------------------|--|--|--|--|--|--|--|--|--|--|--|--------------------------|--|--|--|--|--|
| DRAWN BY A. GURA | | | | | | CHECKED BY S. GOOLLA | | | | | | IN CHARGE D. WEMMER | | | | | | UPRR/SR 99 MAIN LINE AVENUE 21 | | | | | | DRAWING NO. T2094-A | | | | | |
| DATE 4/15/2011 | | | | | | | | | | | | | | | | | | TRACK PLAN AND PROFILE STA A 6202+00 TO STA A 6258+00 | | | | | | SCALE AS SHOWN | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REV | DATE | BY | CHK | APP | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | |

MADERA COUNTY



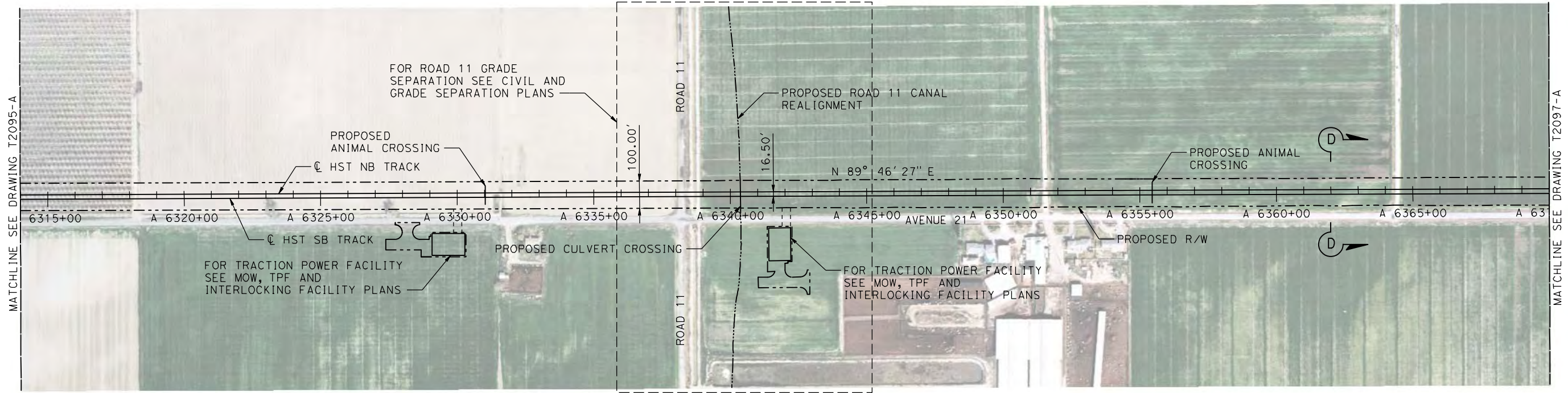
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TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED

PLAN



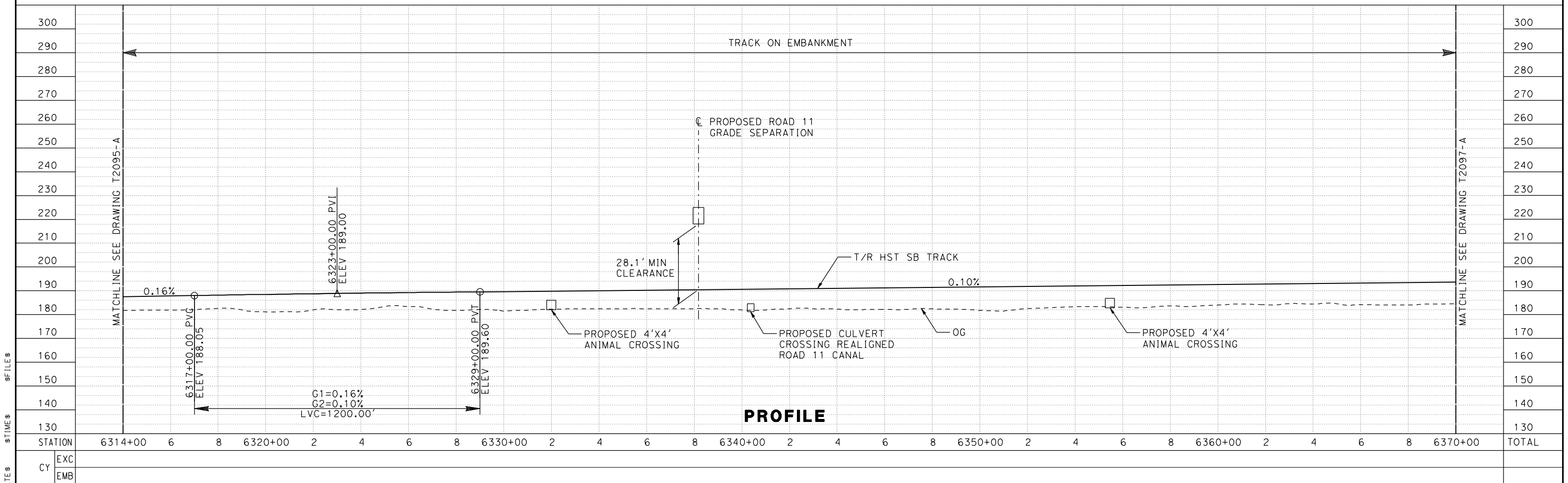
PROFILE



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|---|------|----|-----|-----|-------------|--|--|--|--|--|--|--|--|---|--|
| <div>DESIGNED BY A. GURA DRAWN BY A. GURA CHECKED BY S. GOOLLA IN CHARGE D. WEMMER DATE 4/15/2011</div> | | | | | | <div>15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY</div> <div>NOT FOR CONSTRUCTION</div> | | <div>PARSONS</div> <div>CALIFORNIA HIGH-SPEED RAIL AUTHORITY</div> | | <div>CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 21 TRACK PLAN AND PROFILE STA A 6258+00 TO STA A 6314+00</div> | | | | <div>CONTRACT NO. HSR08-05 DRAWING NO. T2095-A SCALE AS SHOWN SHEET NO.</div> | |
| REV | DATE | BY | CHK | APP | DESCRIPTION | | | | | | | | | | |

MADERA COUNTY

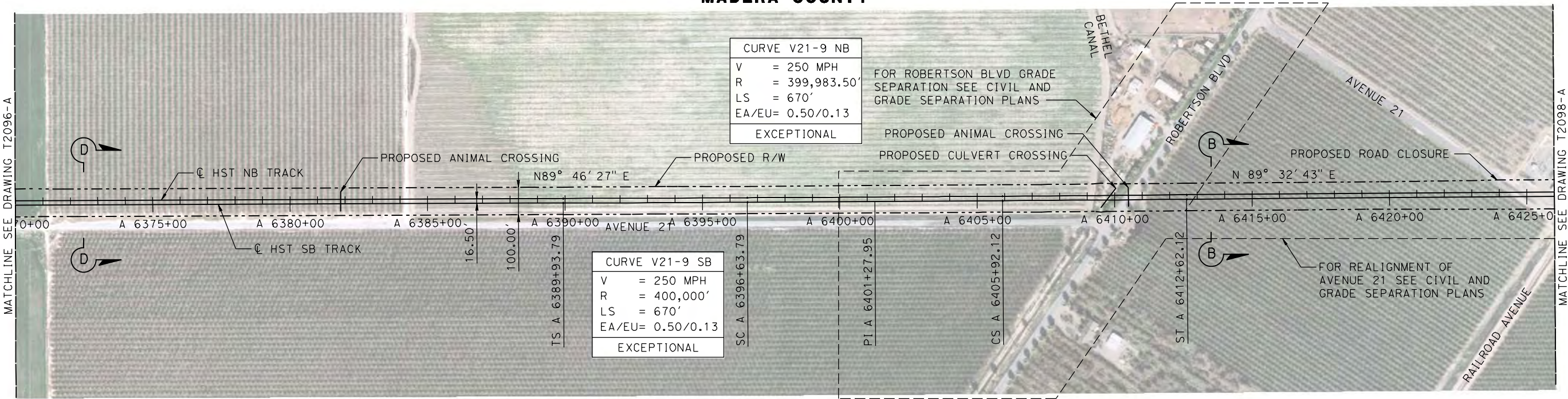
NOTE:
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TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED

PLAN



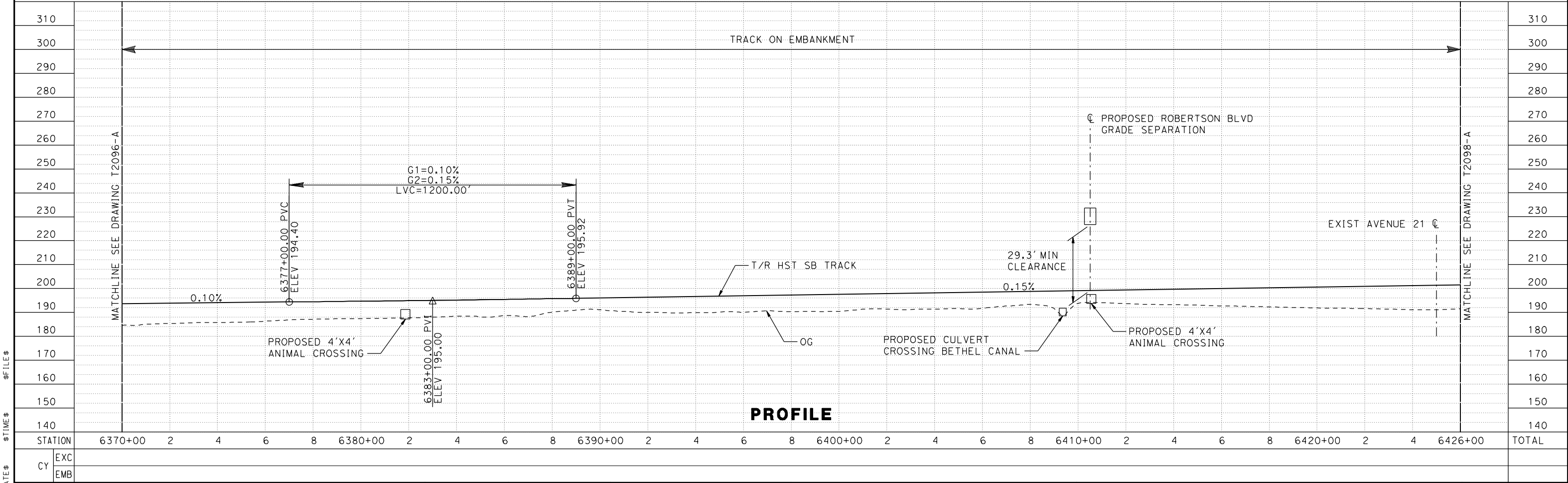
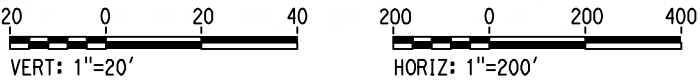
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| \$ USER \$ | | | | | | | DESIGNED BY A. GURA | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY NOT FOR CONSTRUCTION |  PARSONS |  CALIFORNIA HIGH-SPEED RAIL AUTHORITY | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 21 TRACK PLAN AND PROFILE STA A 6314+00 TO STA A 6370+00 | CONTRACT NO. HSR08-05 |
| | | | | | | | DRAWN BY A. GURA | | | | | DRAWING NO. T2096-A |
| | | | | | | | CHECKED BY S. GOOLLA | | | | | SCALE AS SHOWN |
| | | | | | | | IN CHARGE D. WEMMER | | | | | SHEET NO. |
| | | | | | | | DATE 4/15/2011 | | | | | |
| | REV | DATE | BY | CHK | APP | DESCRIPTION | | | | | | |

MADERA COUNTY





NOTE:
TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT
TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED

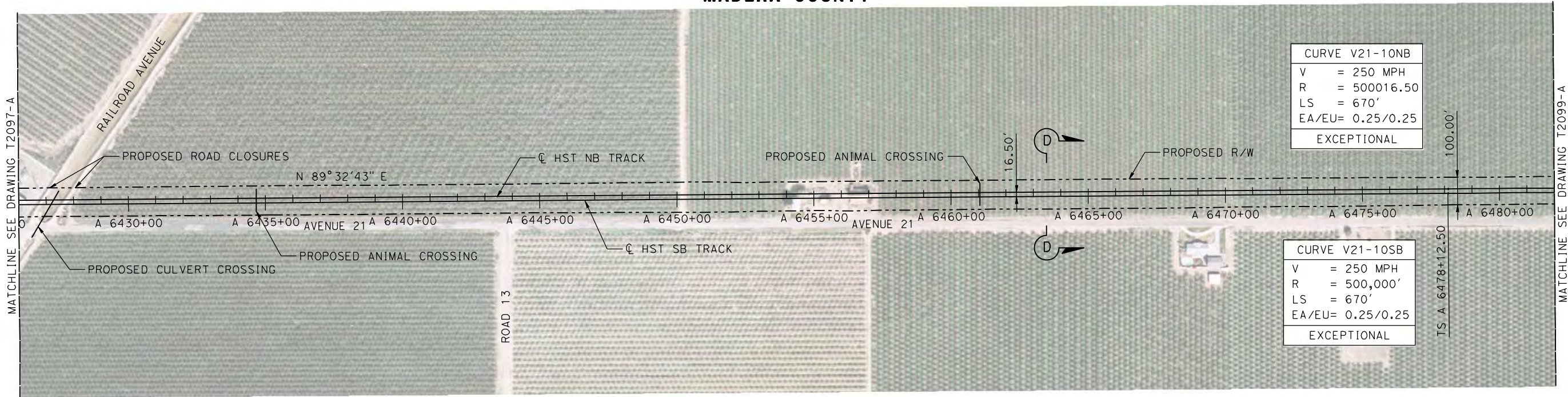
PLAN



PROFILE

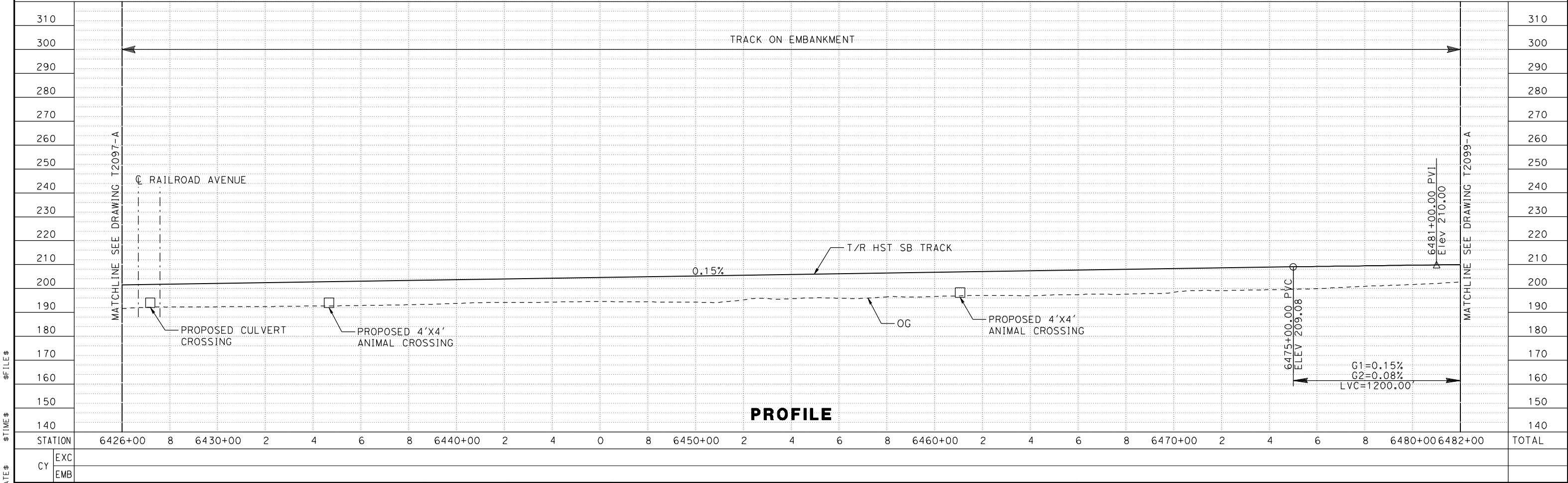
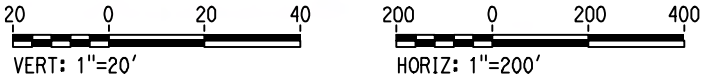
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| \$ | | | | | | | DESIGNED BY A. GURA | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY |  |  | CALIFORNIA HIGH-SPEED RAIL AUTHORITY | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 21 TRACK PLAN AND PROFILE STA A 6370+00 TO STA A 6426+00 | | | CONTRACT NO. HSR08-05 | |
| | | | | | | | DRAWN BY A. GURA | | | | | | | | DRAWING NO. T2097-A | |
| | | | | | | | CHECKED BY S. GOOLLA | | | | | | | | SCALE AS SHOWN | |
| | | | | | | | IN CHARGE D. WEMMER | | | | | | | | SHEET NO. | |
| | | | | | | | DATE 4/15/2011 | | | | | | | | | |
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MADERA COUNTY





NOTE:
TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT
TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED

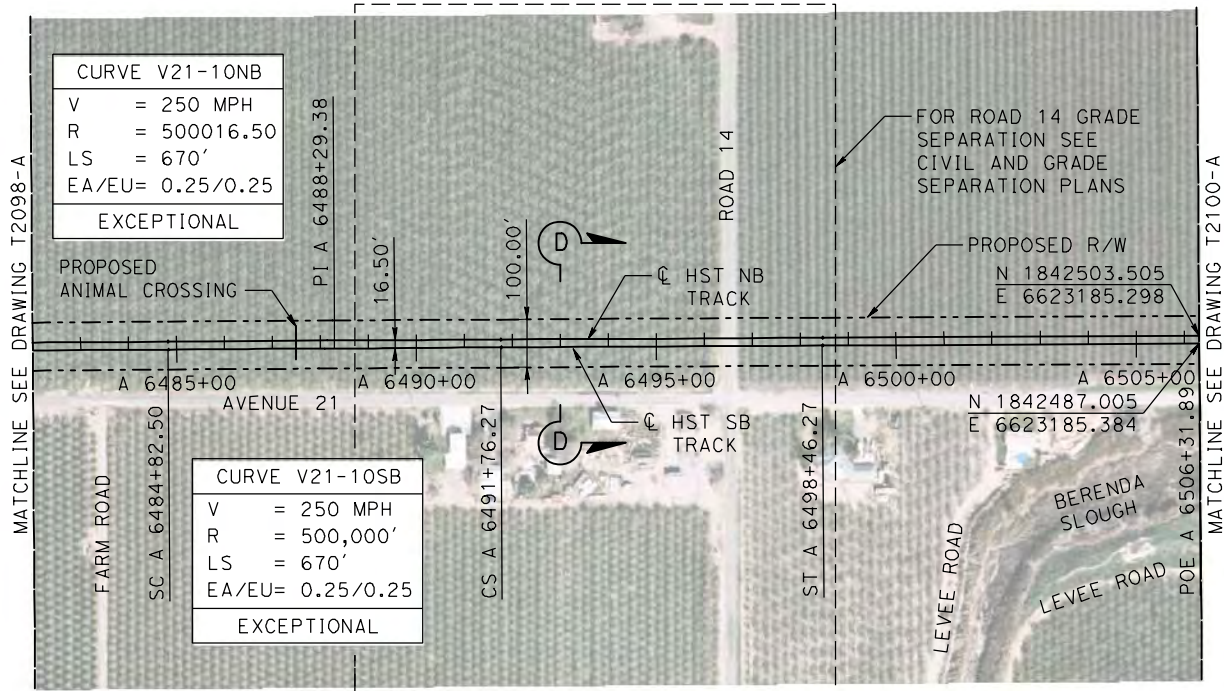
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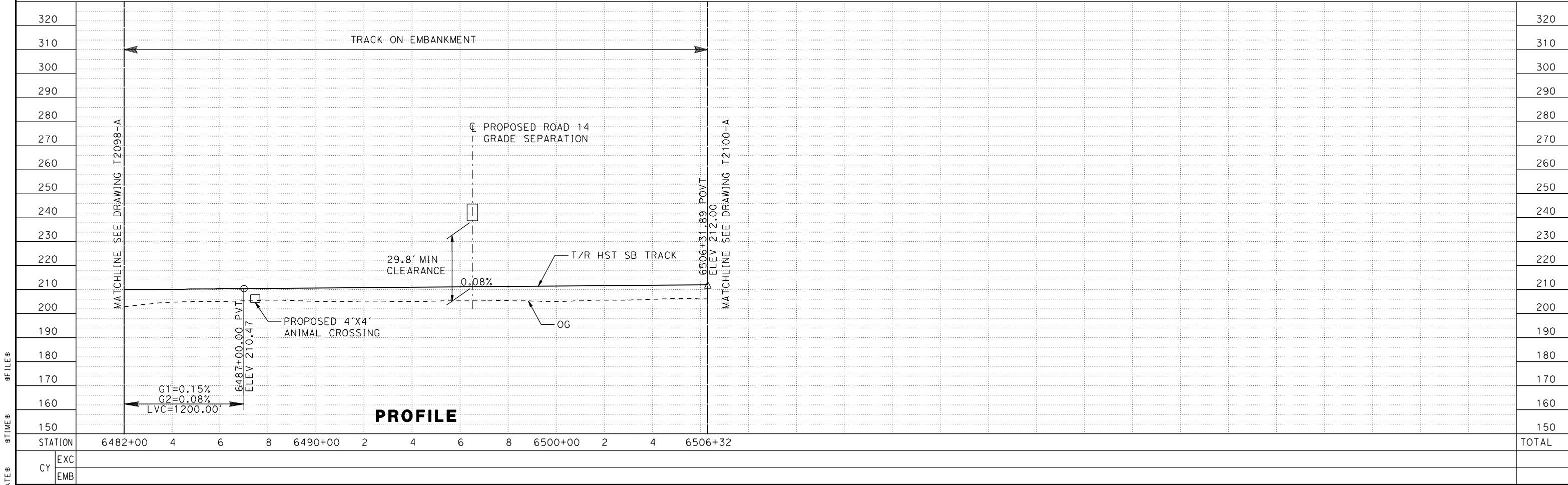
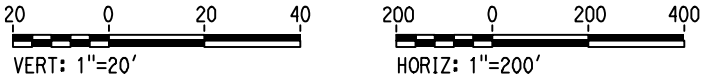
PROFILE



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| \$ | | | | | | | DESIGNED BY A. GURA | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY |  |  | CALIFORNIA HIGH-SPEED RAIL AUTHORITY | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 21 TRACK PLAN AND PROFILE STA A 6426+00 TO STA A 6482+00 | | | CONTRACT NO. HSR08-05 |
| | | | | | | | DRAWN BY A. GURA | | | | | | | | DRAWING NO. T2098-A |
| | | | | | | | CHECKED BY S. GOOLLA | | | | | | | | SCALE AS SHOWN |
| | | | | | | | IN CHARGE D. WEMMER | | | | | | | | SHEET NO. |
| | | | | | | | DATE 4/15/2011 | | | | | | | | NOT FOR CONSTRUCTION |
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MADERA COUNTY

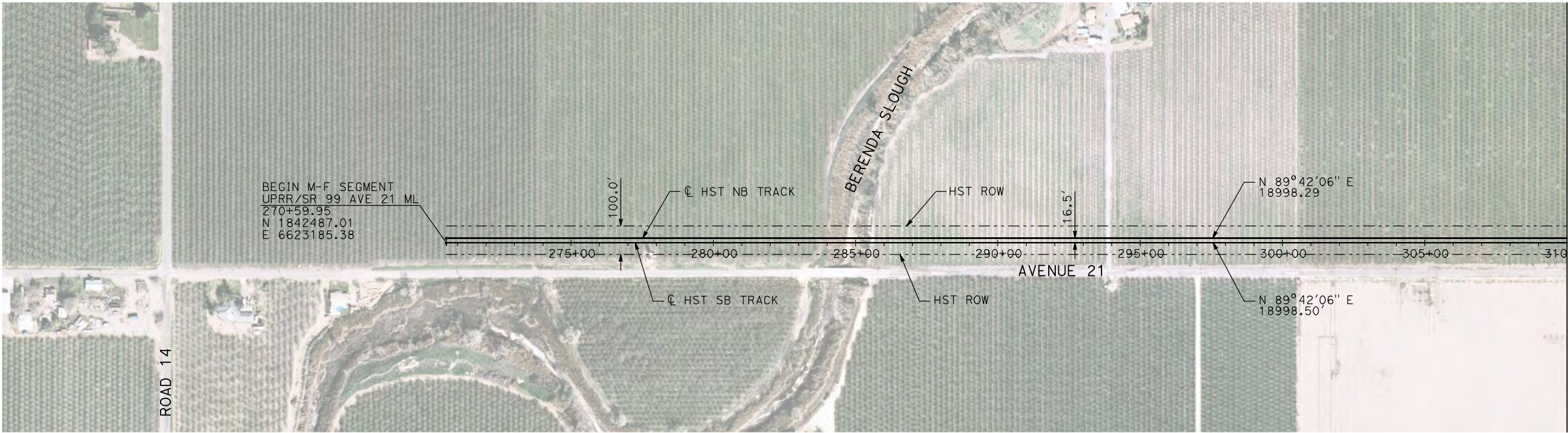


PLAN



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| \$ | | | | | | | DESIGNED BY A. GURA | 15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY |  |  | CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO UPRR/SR 99 MAIN LINE AVENUE 21 TRACK PLAN AND PROFILE STA A 6482+00 TO STA A 6506+32 | | | CONTRACT NO. HSR08-05 |
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| | | | | | | | IN CHARGE D. WEMMER | | | | | | | SHEET NO. |
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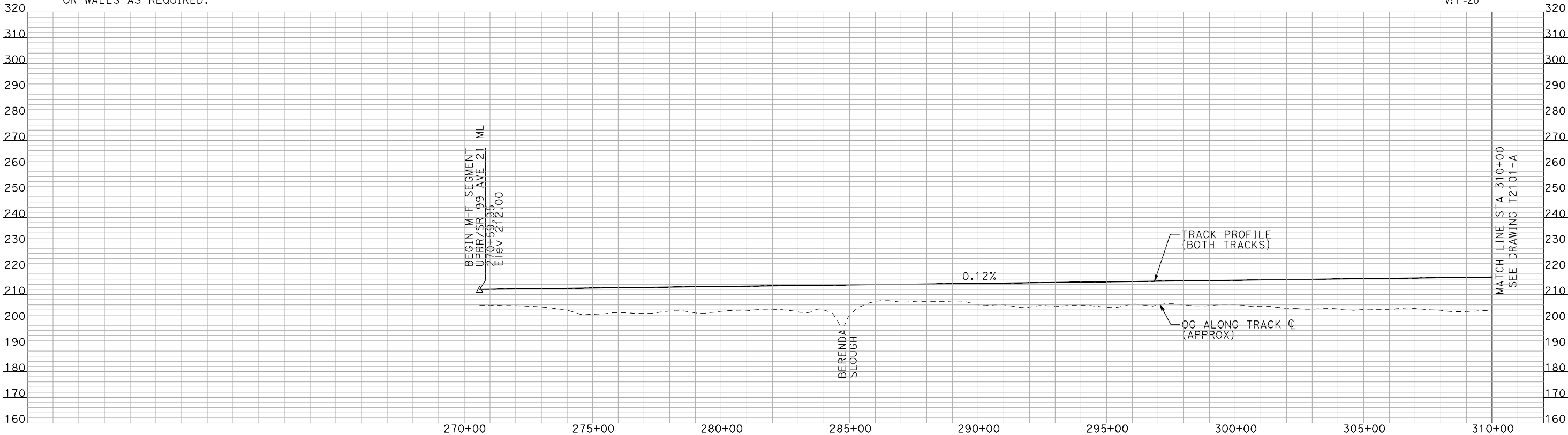
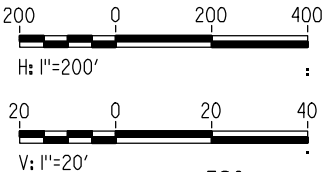
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

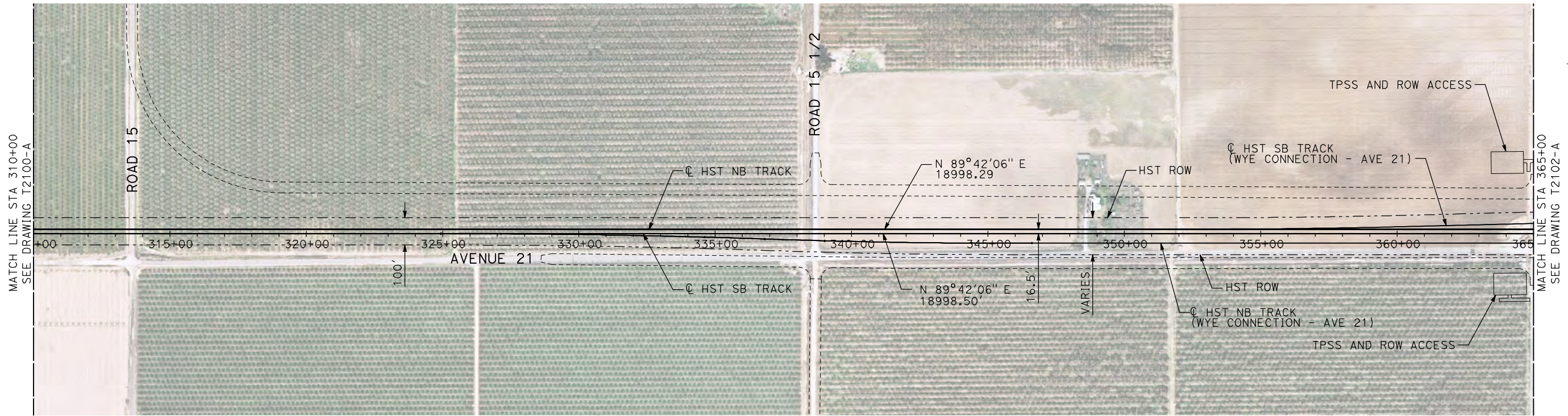


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 270+59.95 TO STA 310+00

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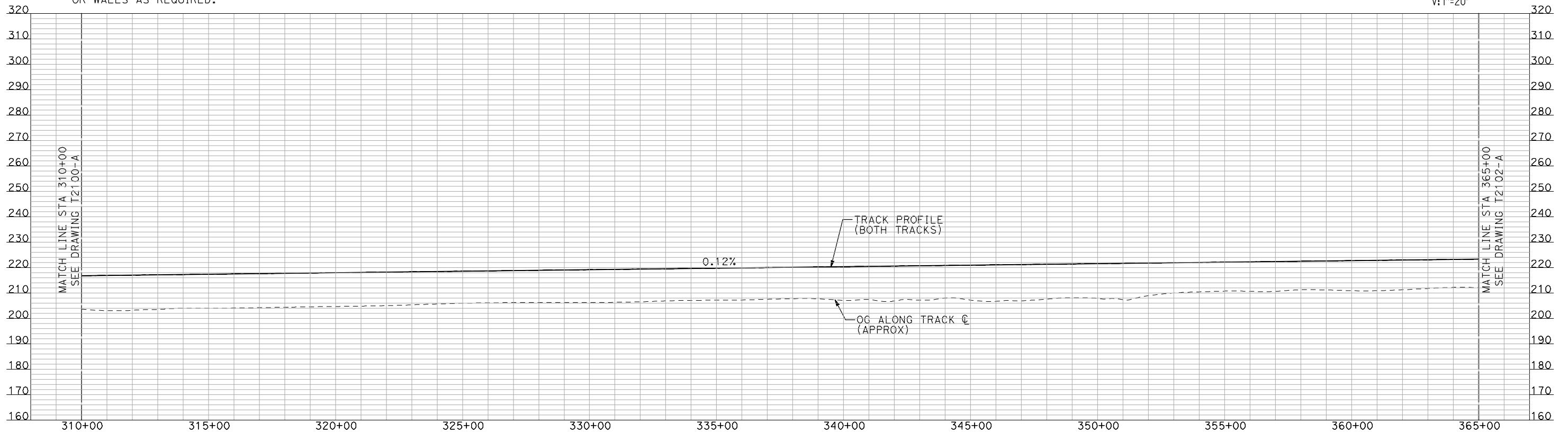
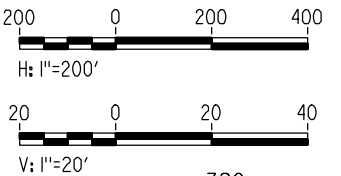
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

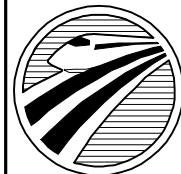
"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

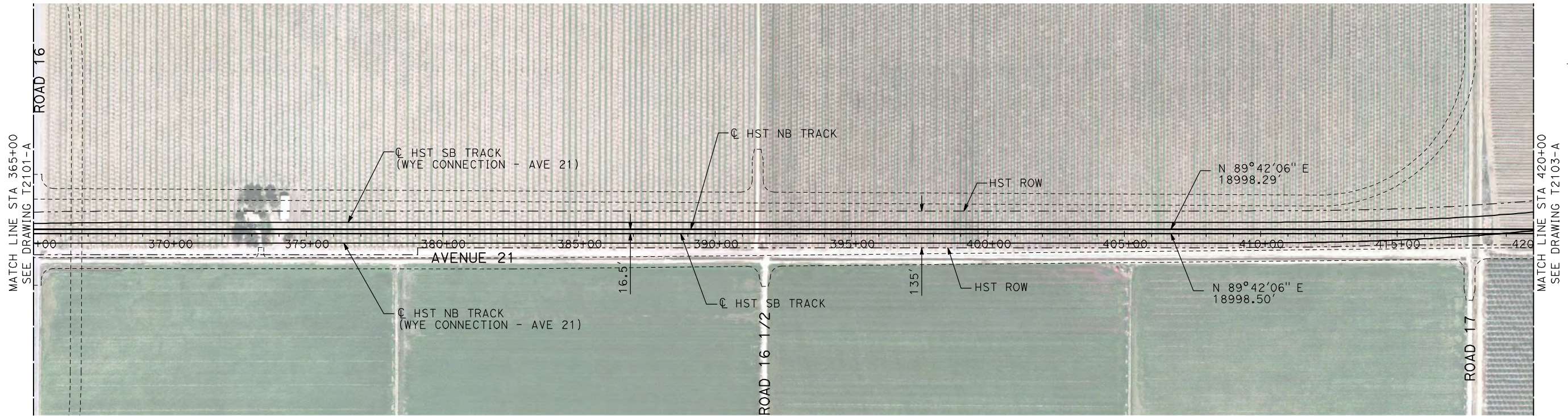


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 310+00 TO STA 365+00

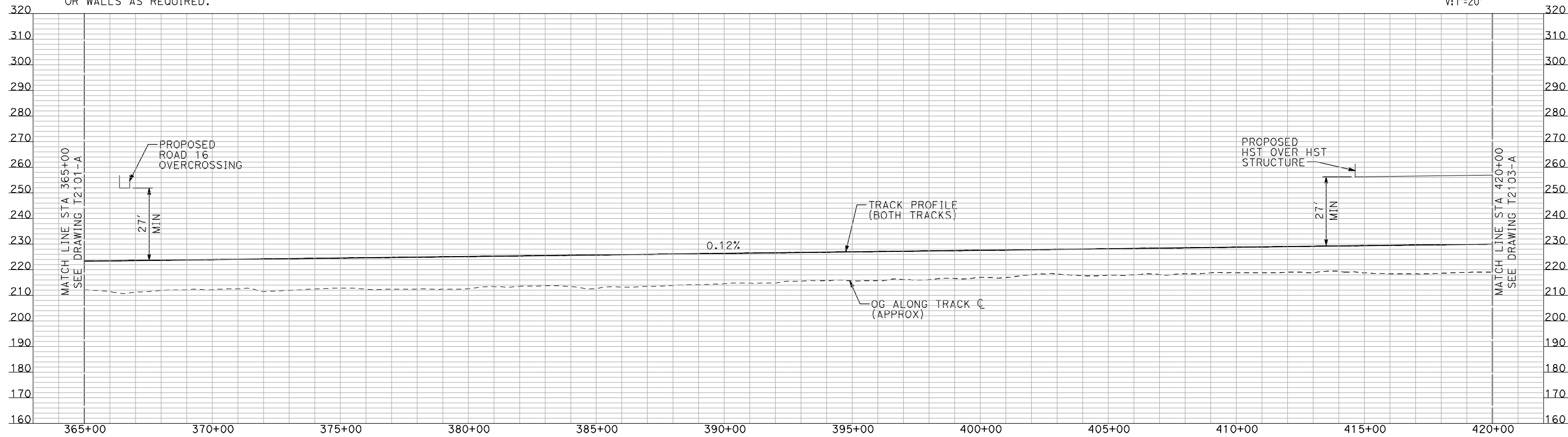
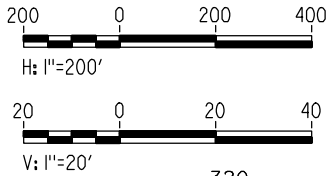
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- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

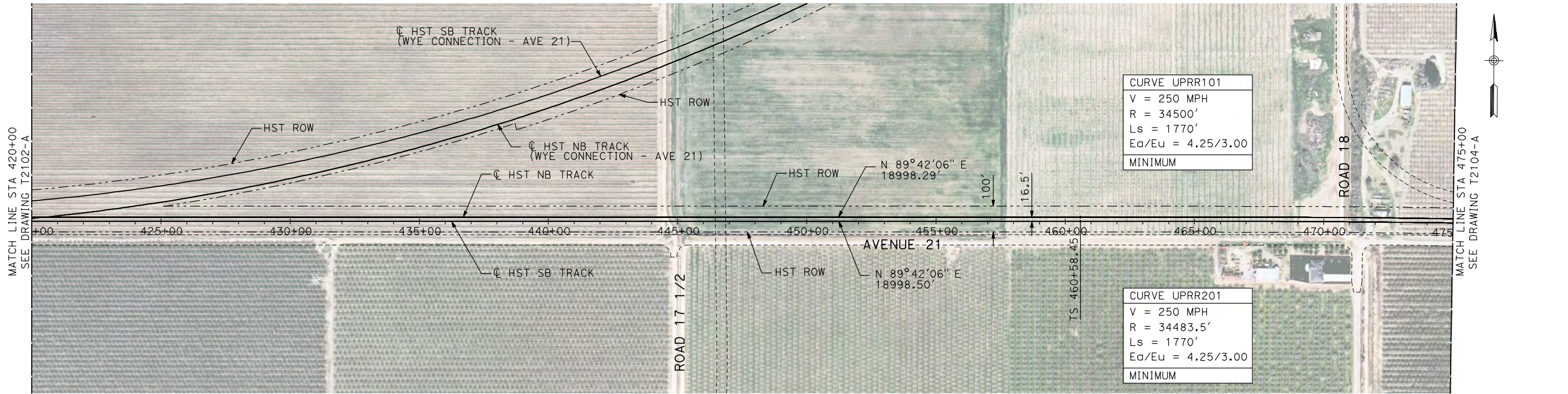


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 365+00 TO STA 420+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2102-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

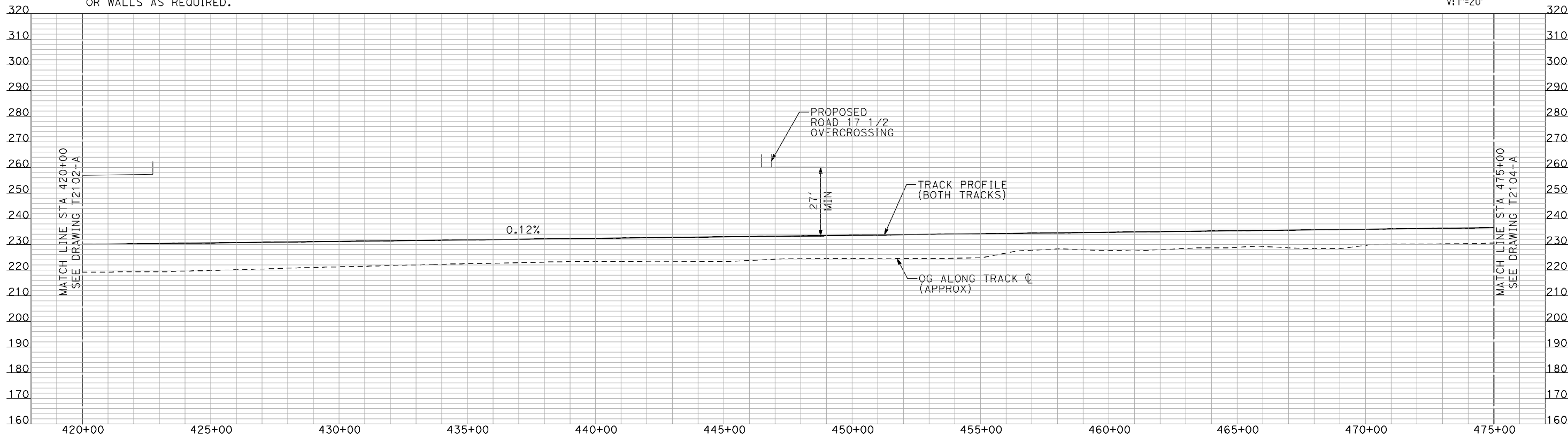
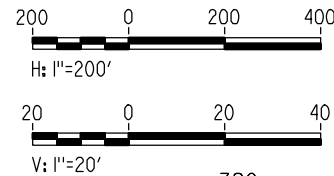
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

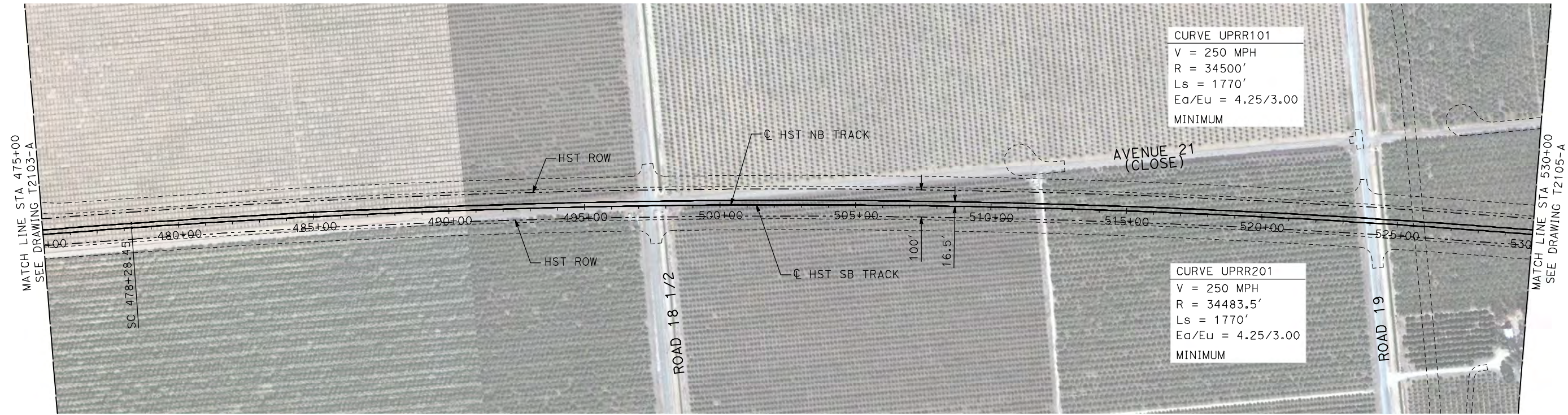
NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 420+00 TO STA 475+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2103-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

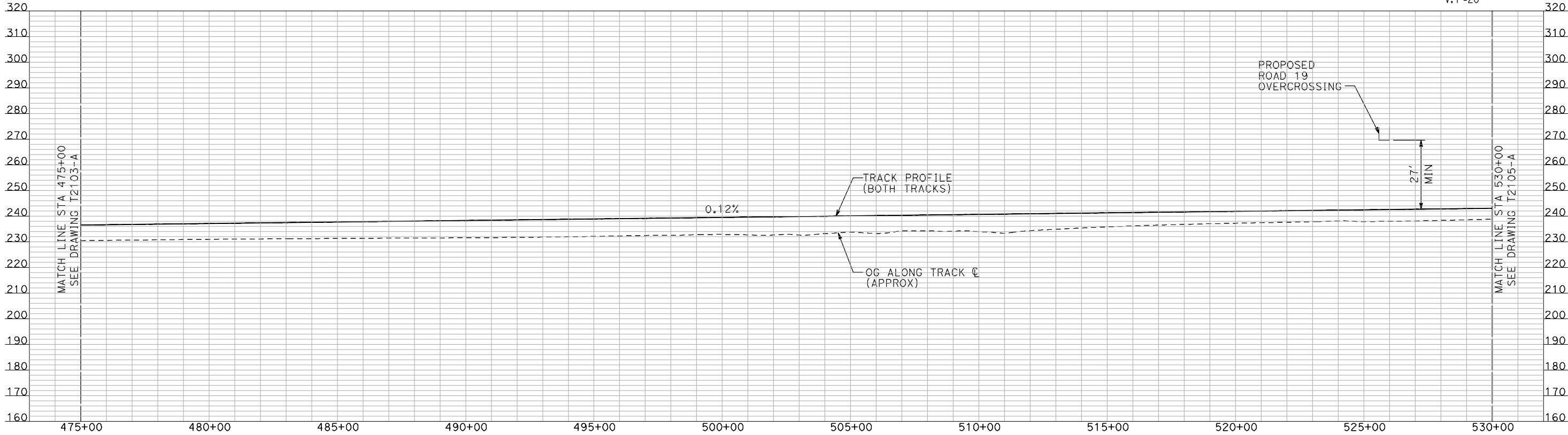
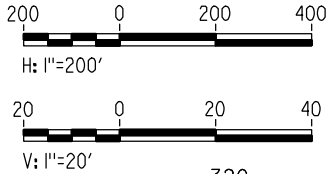
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NOTES:

- ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

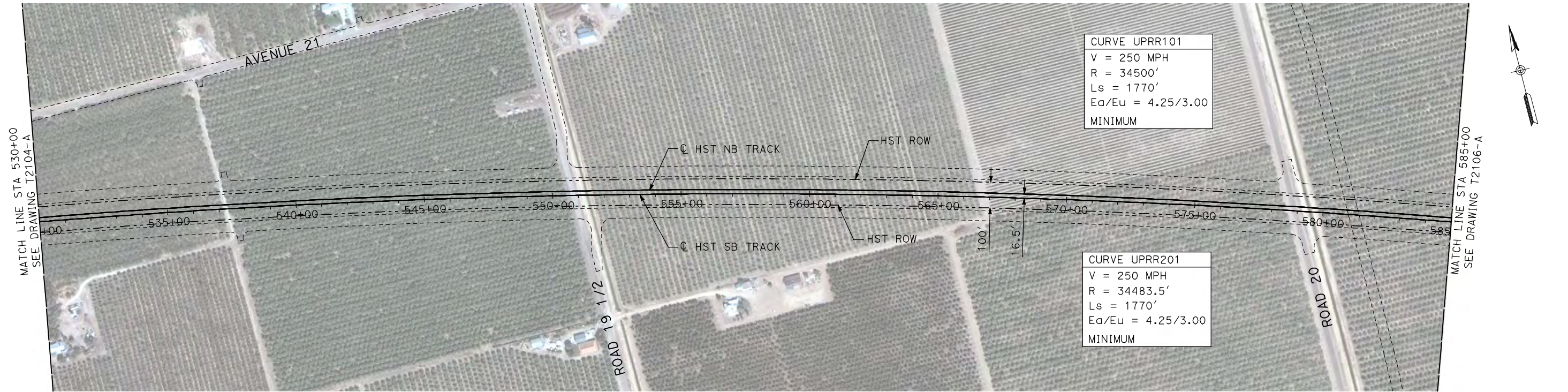


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 475+00 TO STA 530+00

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|---------------------------|
| CONTRACT NO. HSR06-007 |
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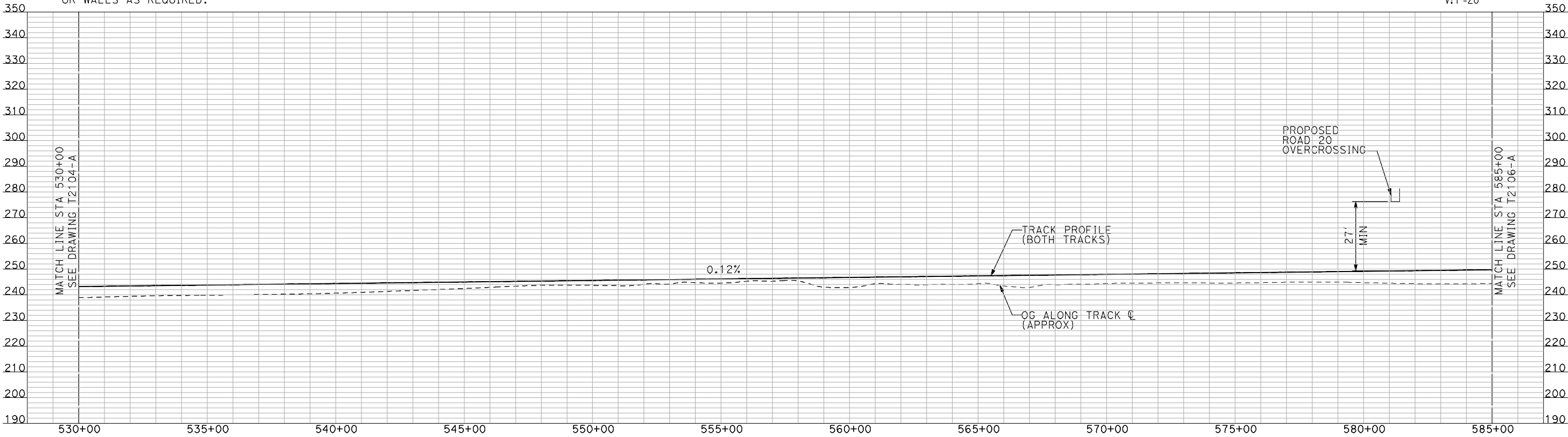
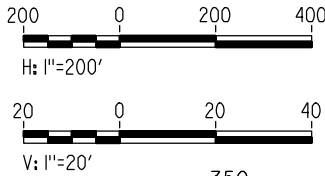
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

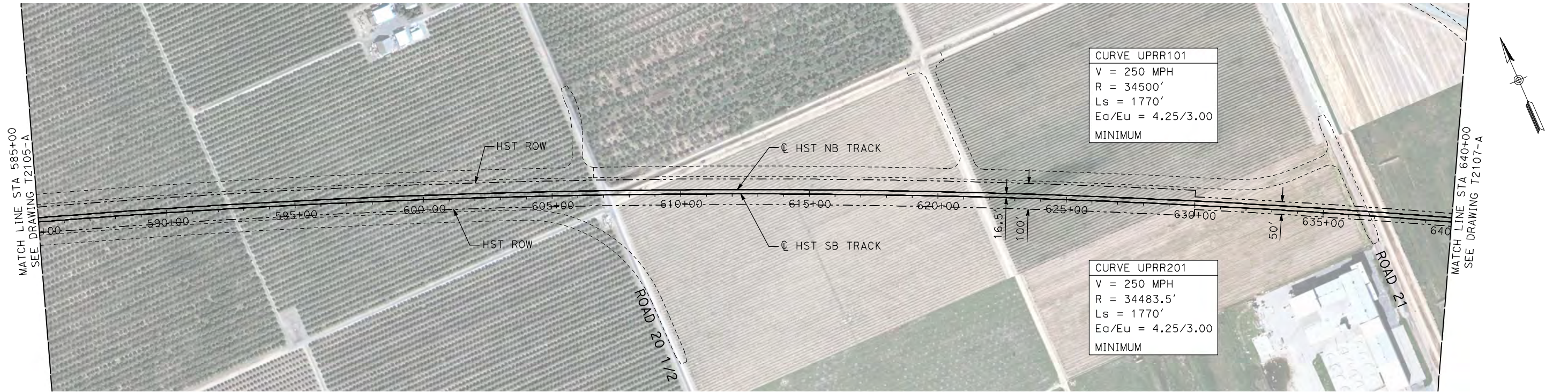
CH2M HILL



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 530+00 TO STA 585+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2105-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

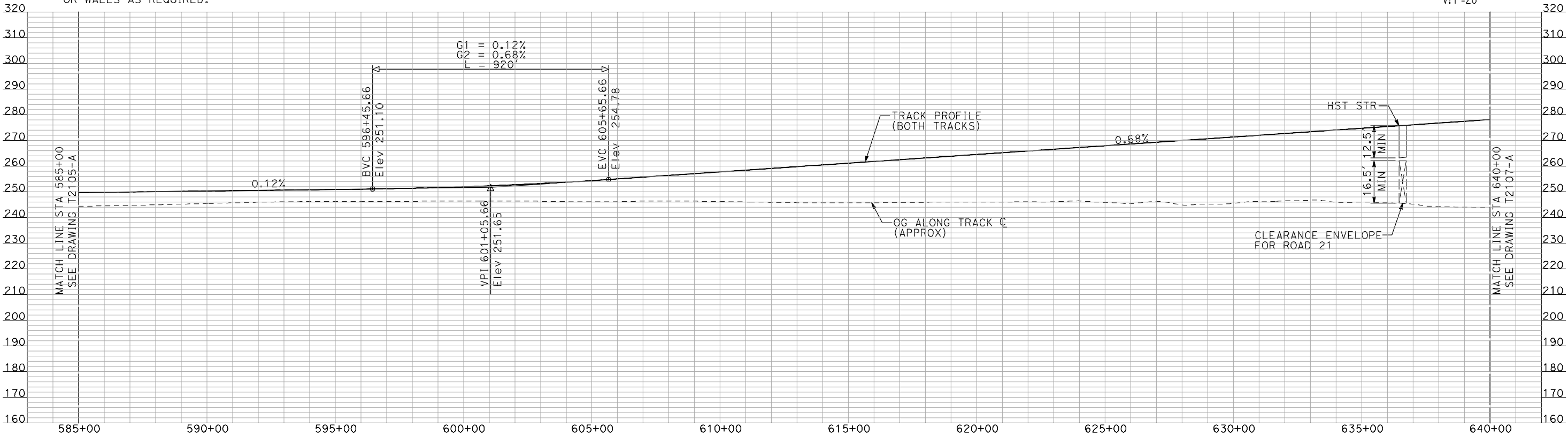
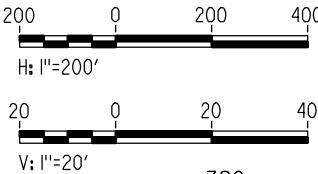
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

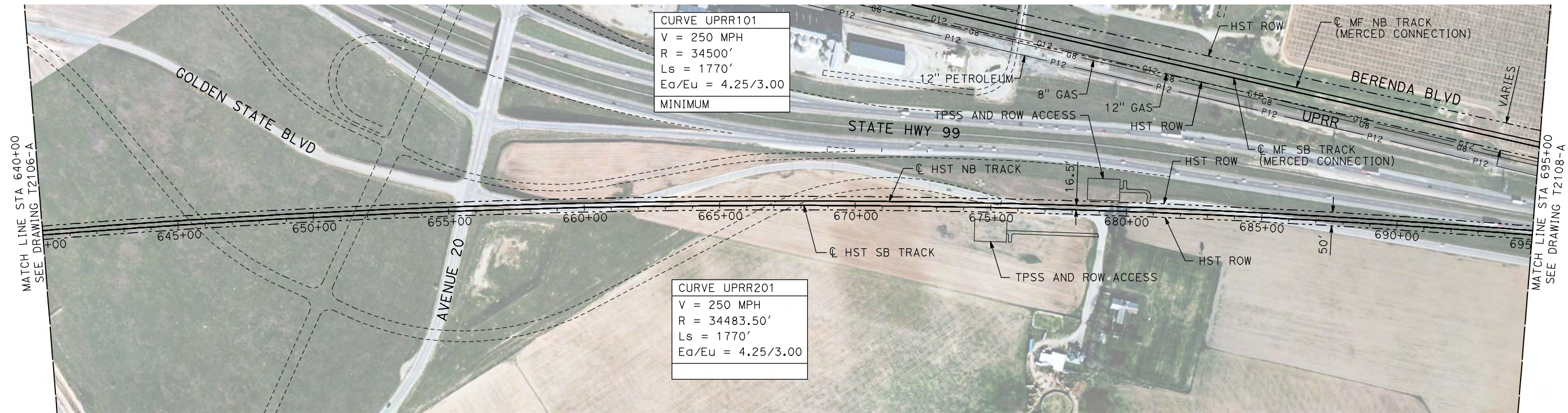
NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 585+00 TO STA 640+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2106-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

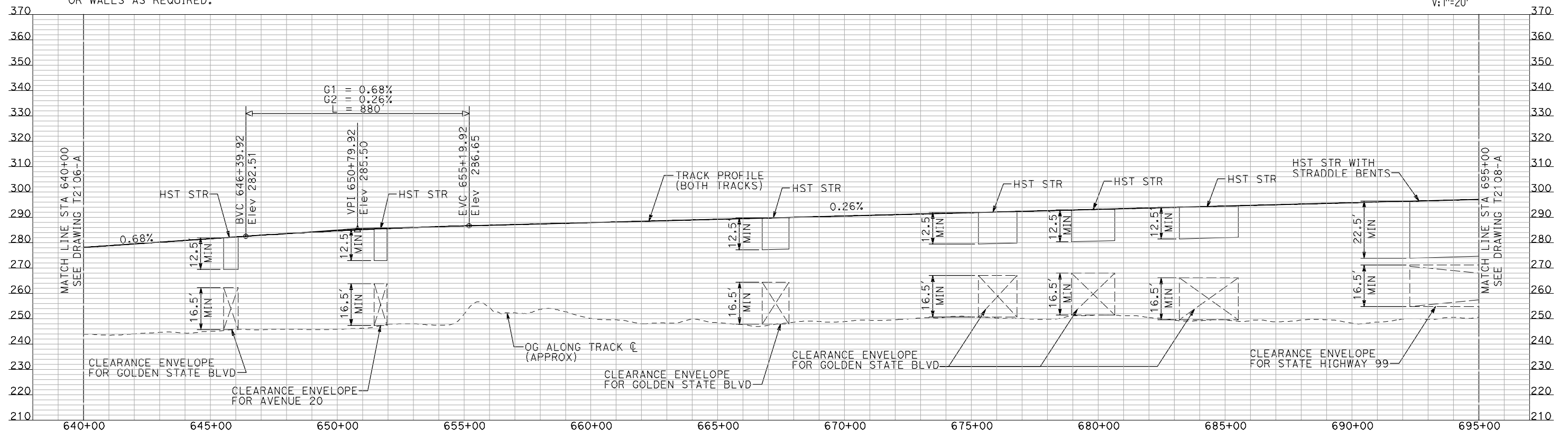
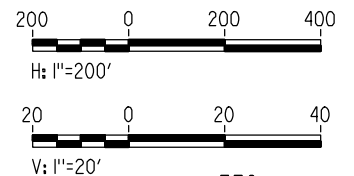
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

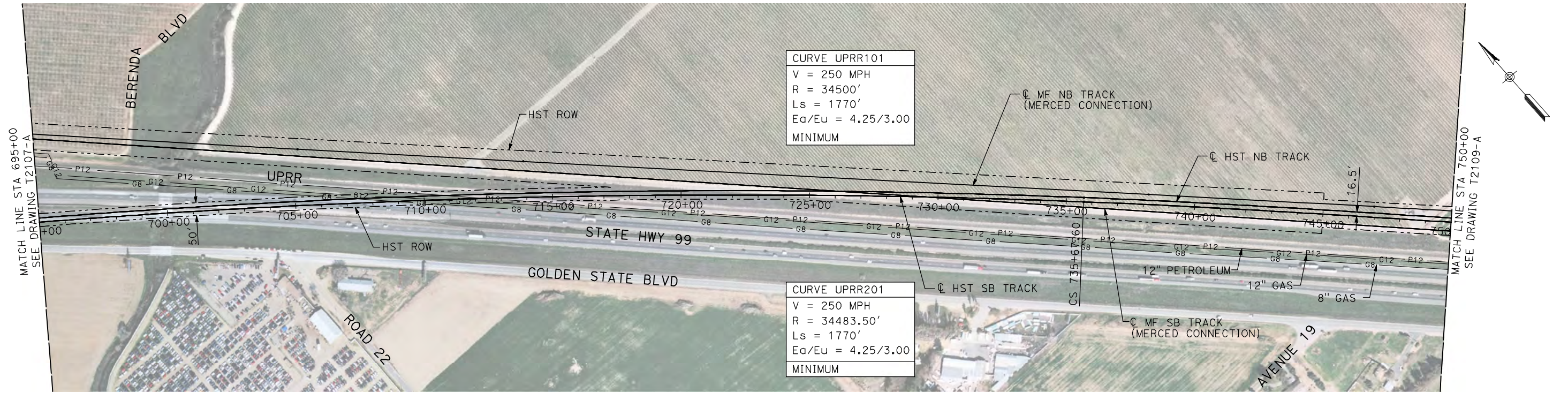
AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 640+00 TO STA 695+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2107-A
SCALE
AS SHOWN
SHEET NO.
OF

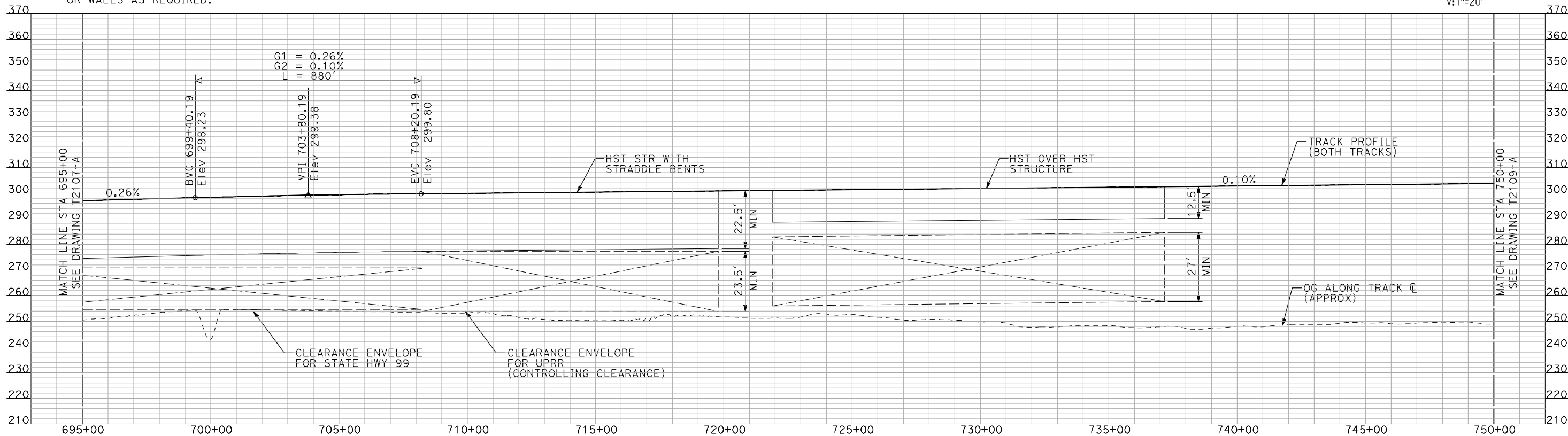
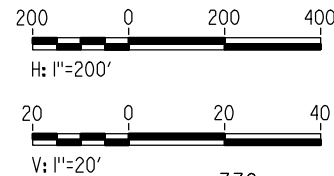
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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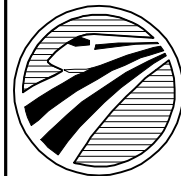
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2M HILL

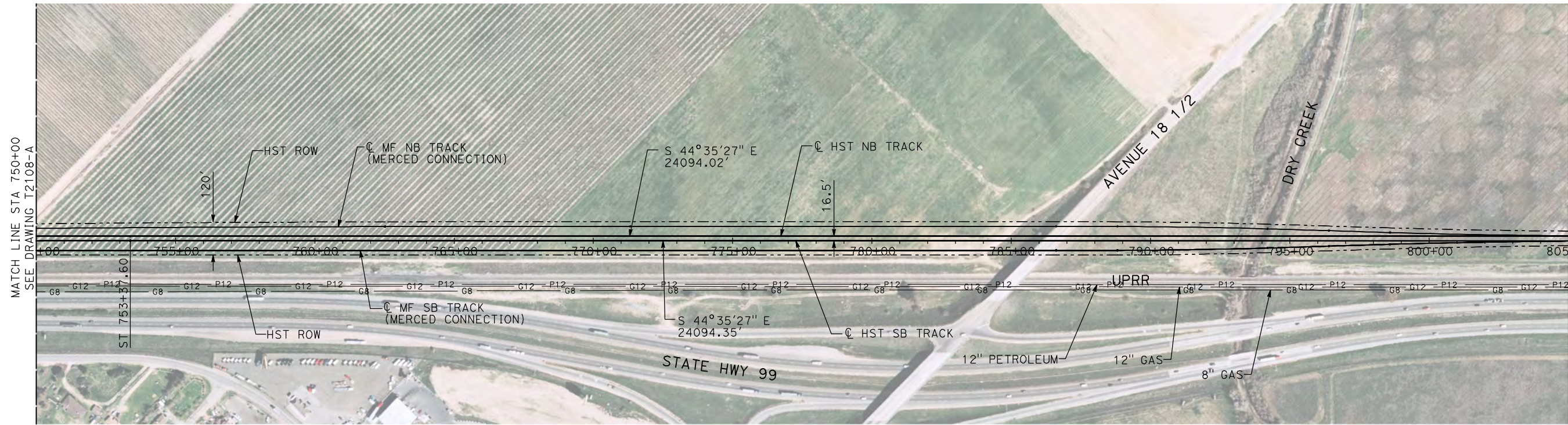


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE
AVENUE 21
PLAN AND PROFILE
STA 695+00 TO STA 750+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2108-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

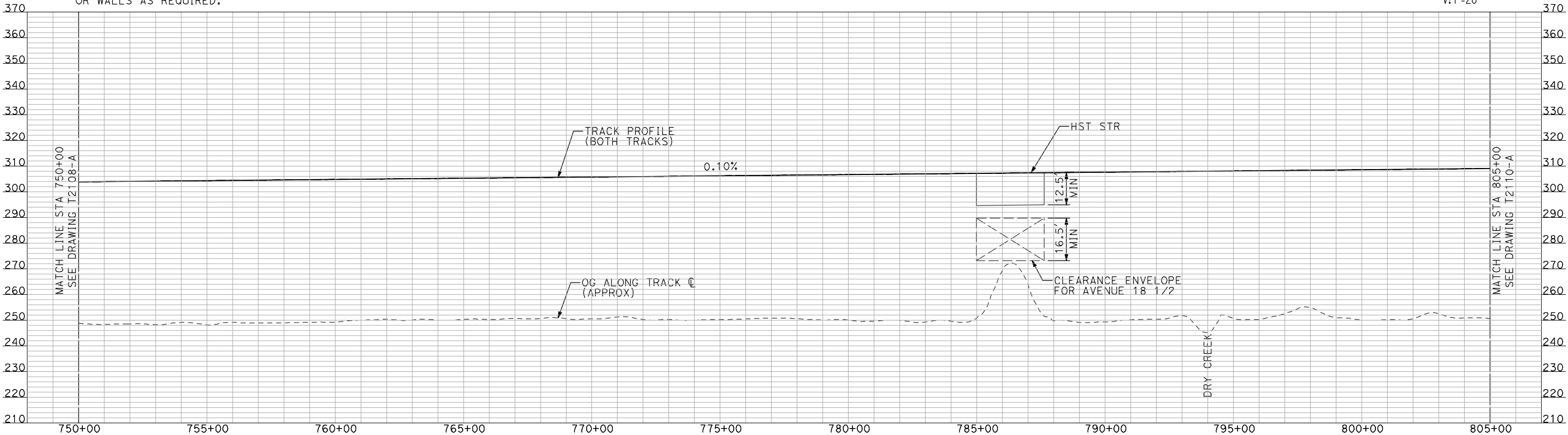
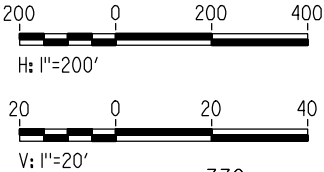
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

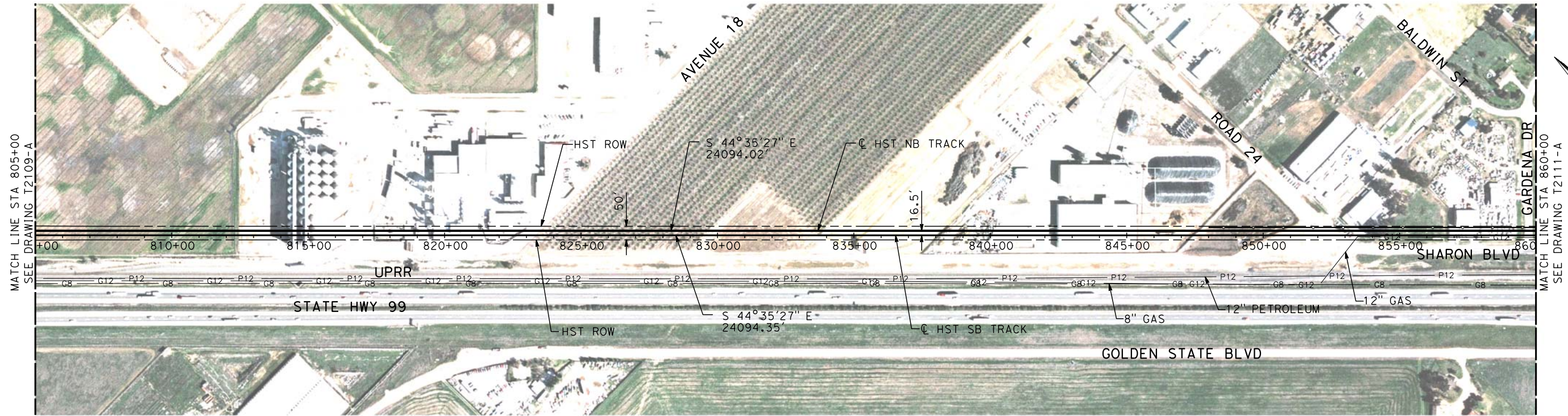


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 750+00 TO STA 805+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2109-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

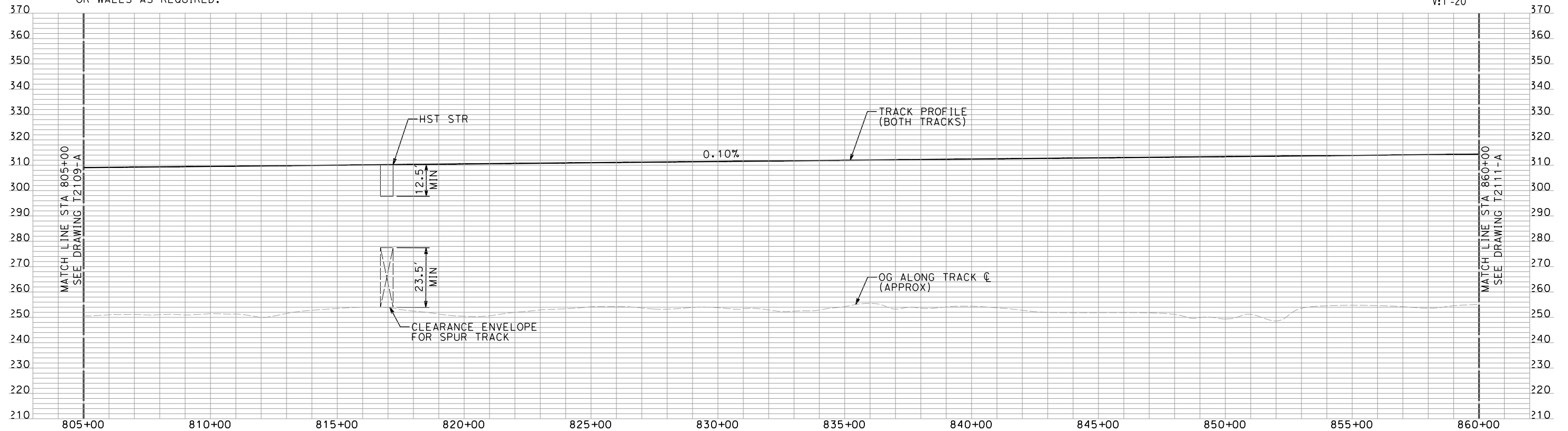
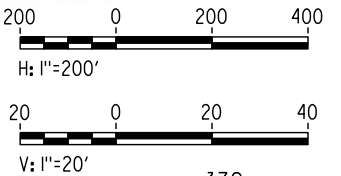
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shieldsa



NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

| |
|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



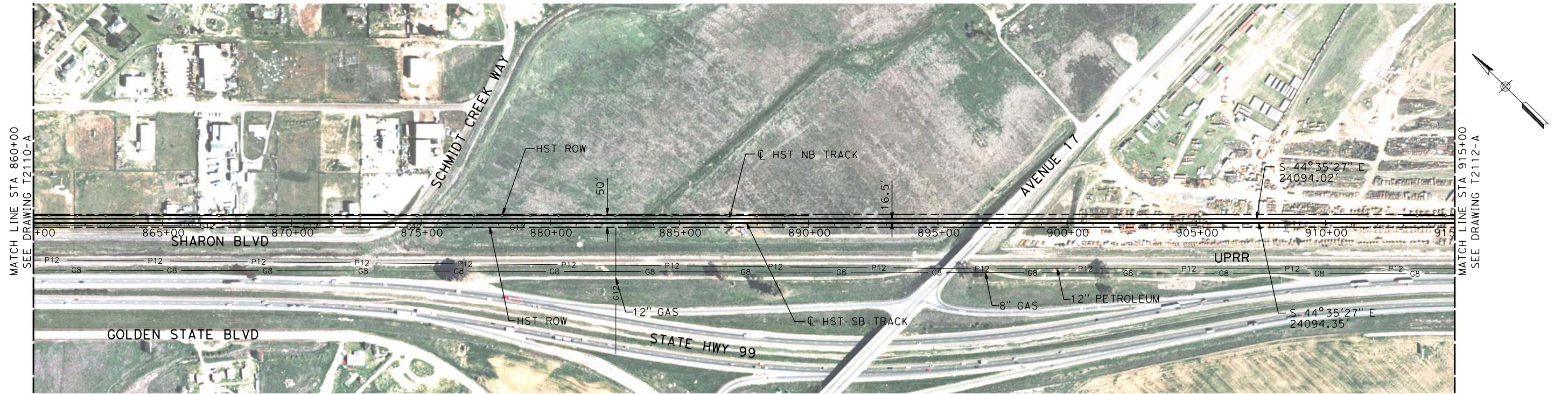
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 805+00 TO STA 860+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2110-A |
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| SHEET NO. ### OF ### |

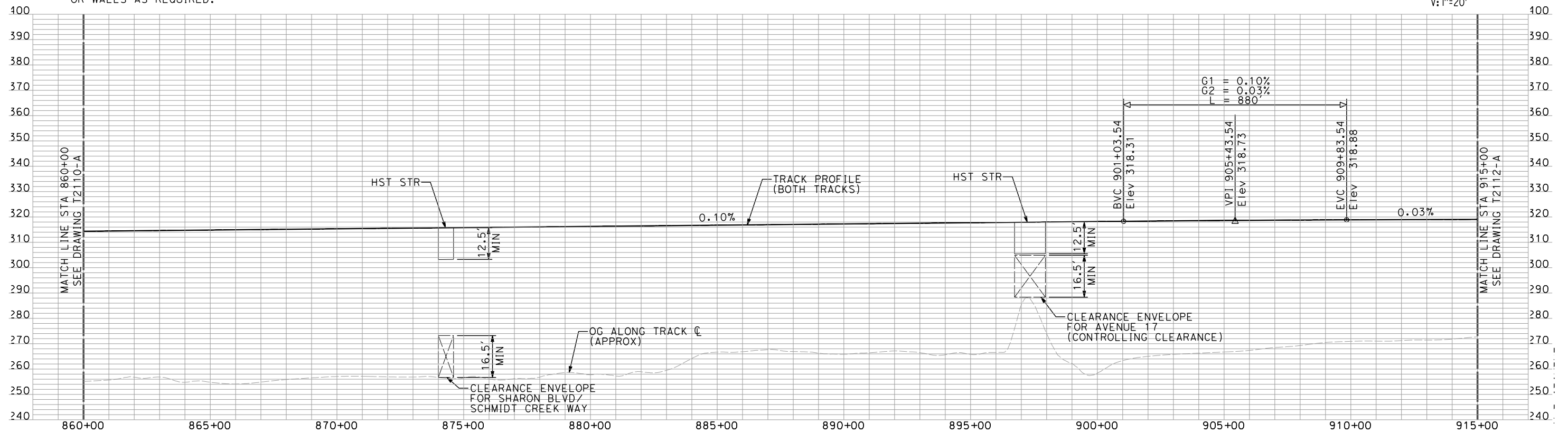
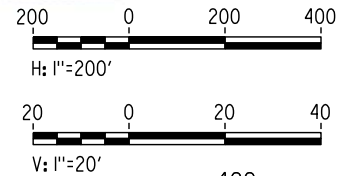
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shieldsa



NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

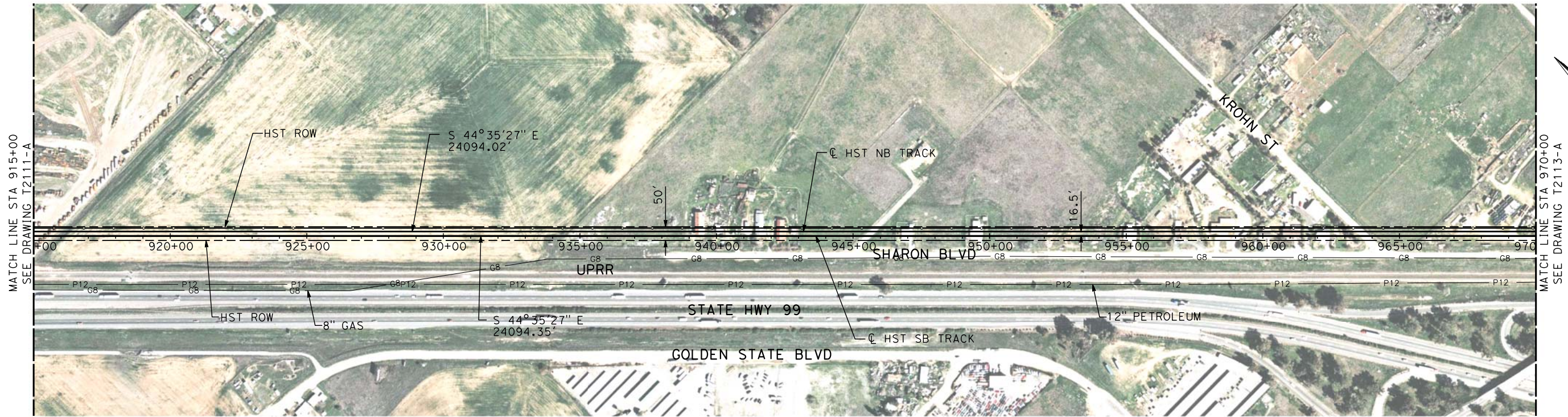


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 860+00 TO STA 915+00

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| CONTRACT NO. HSR06-007 |
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| SHEET NO. ### OF ### |

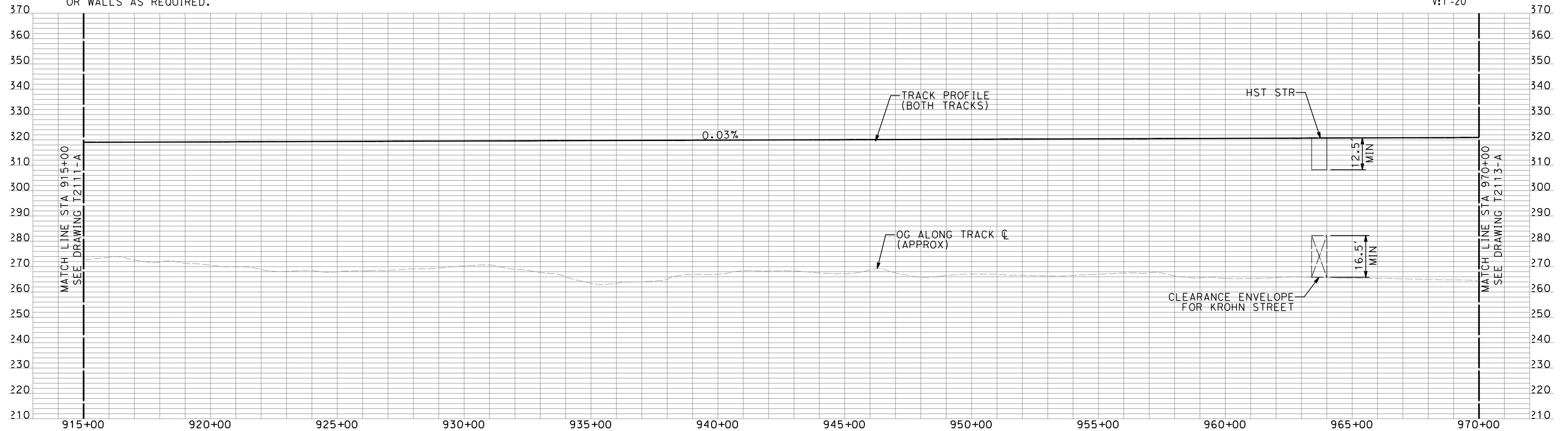
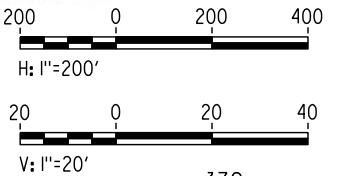
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shieldsa



NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

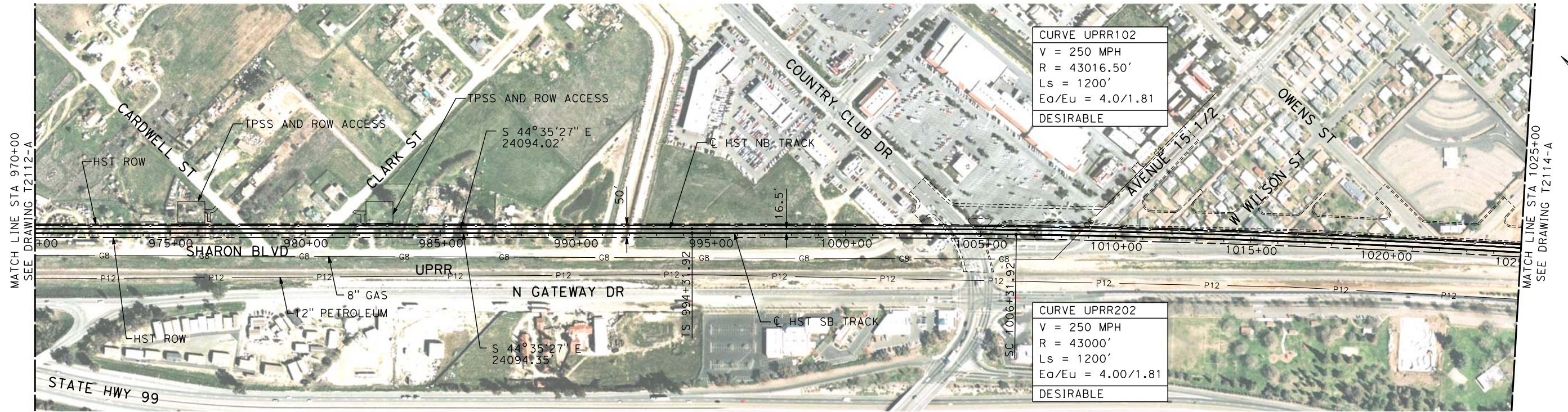


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 915+00 TO STA 970+00

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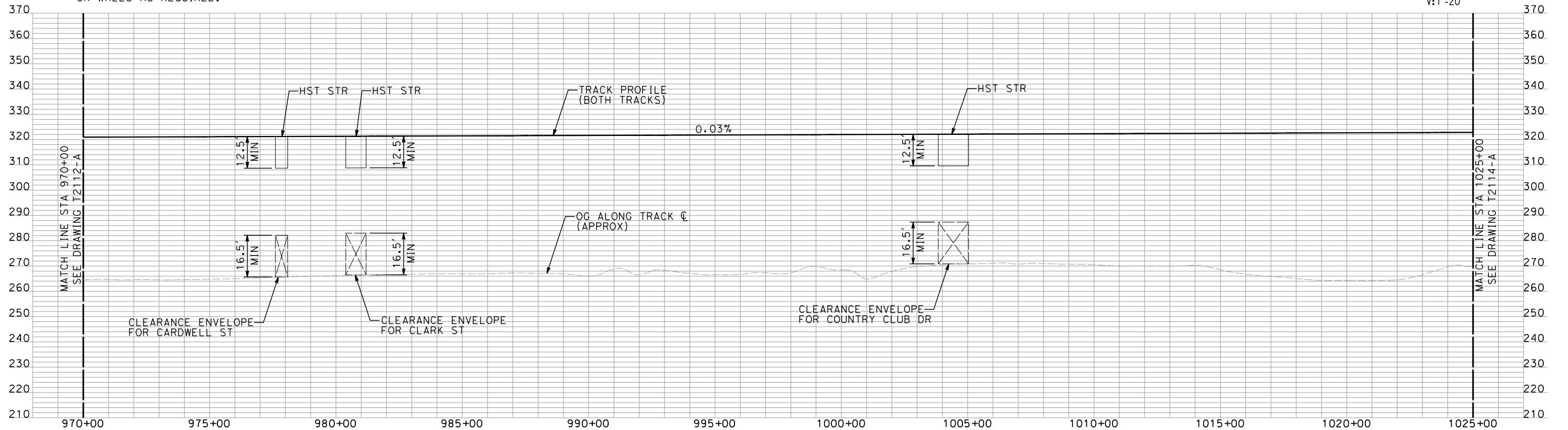
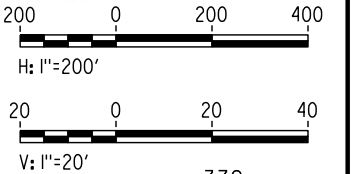
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shieldsa



NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 970+00 TO STA 1025+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2113-A
SCALE
AS SHOWN
SHEET NO.
OF

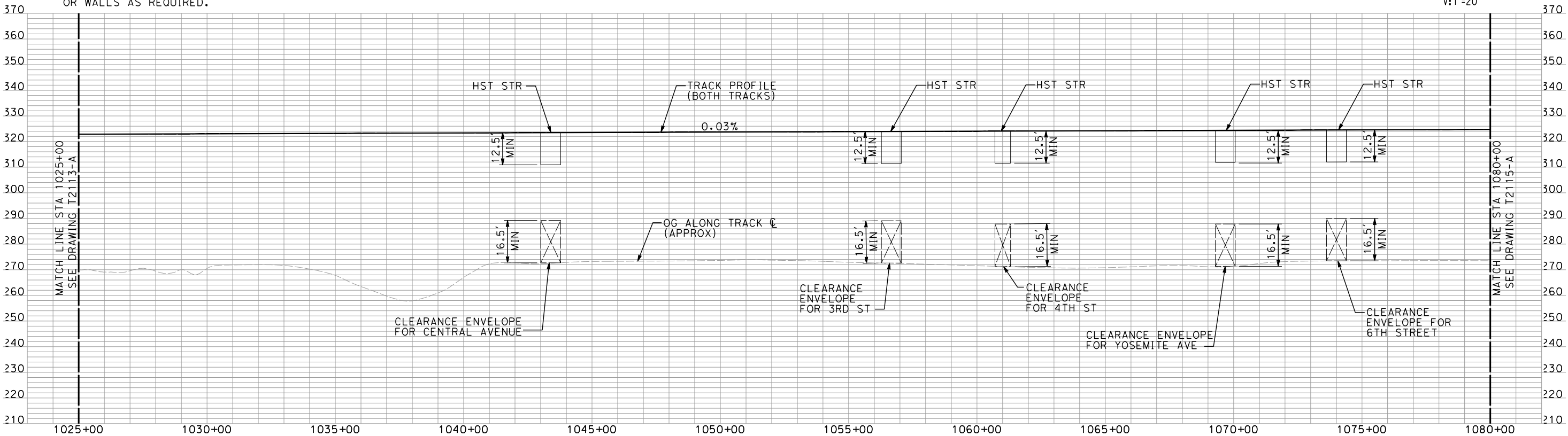
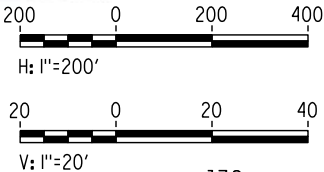
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shieldsa



NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

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|---------------------------|
| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



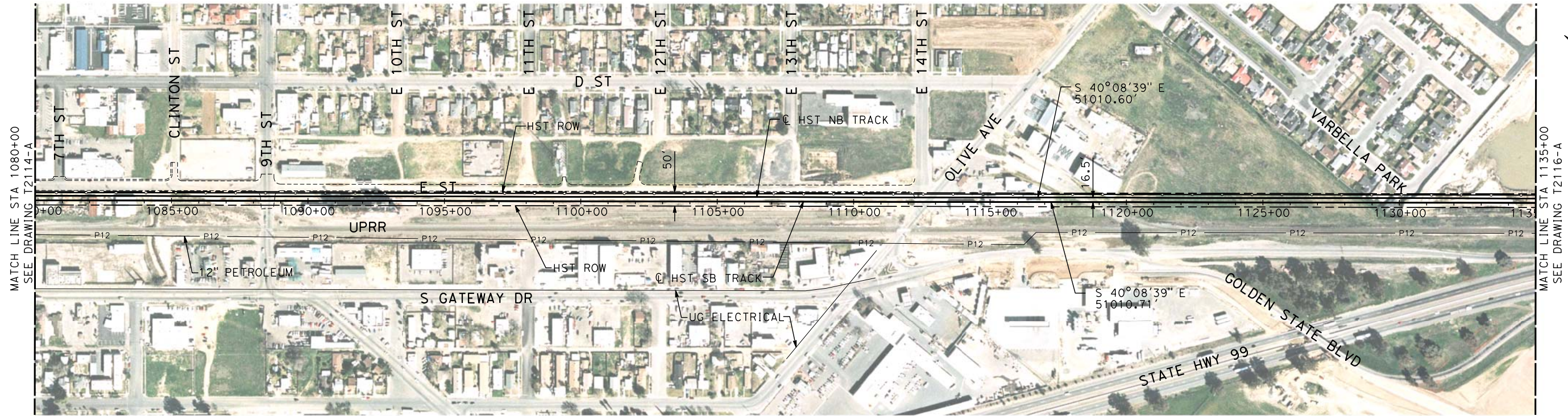
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1025+00 TO STA 1080+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2114-A |
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| SHEET NO. ### OF ### |

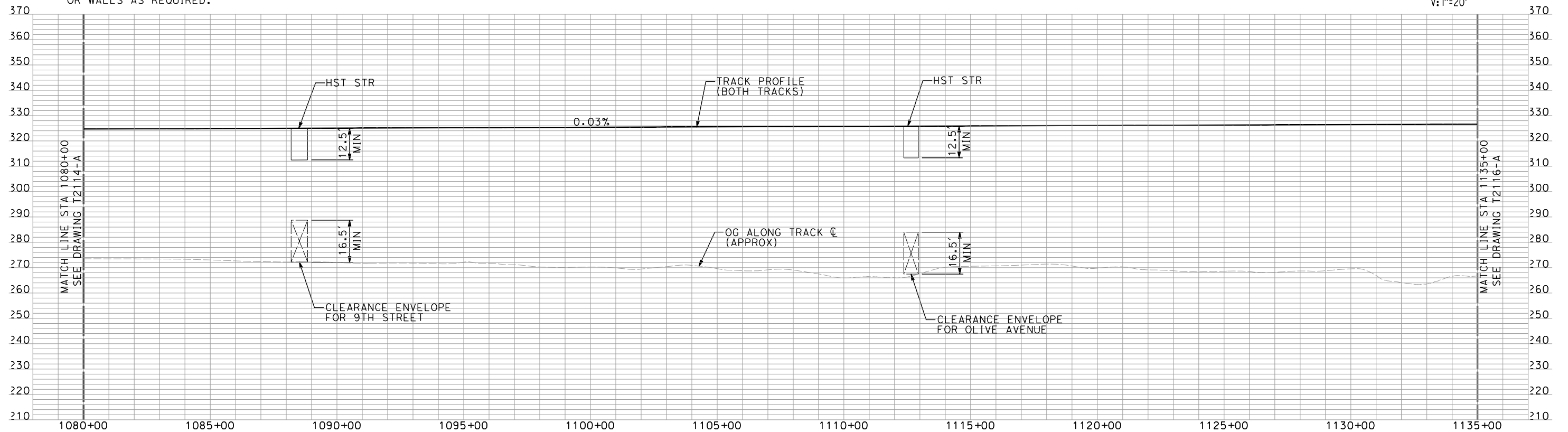
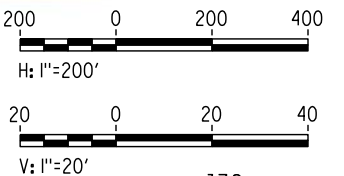
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shieldsa



NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL

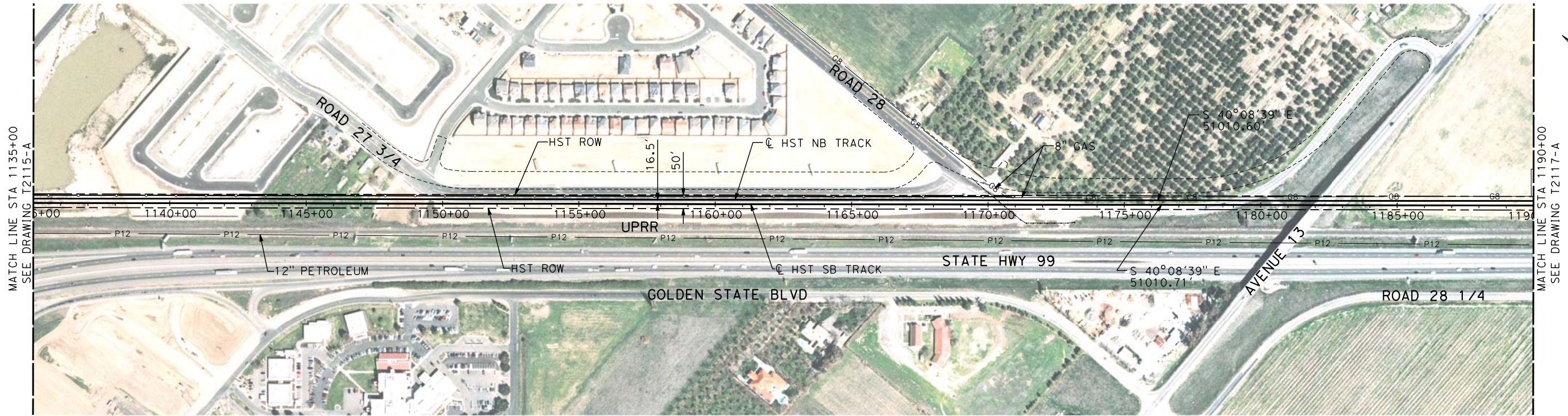


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1080+00 TO STA 1135+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2115-A
SCALE
AS SHOWN
SHEET NO.
OF

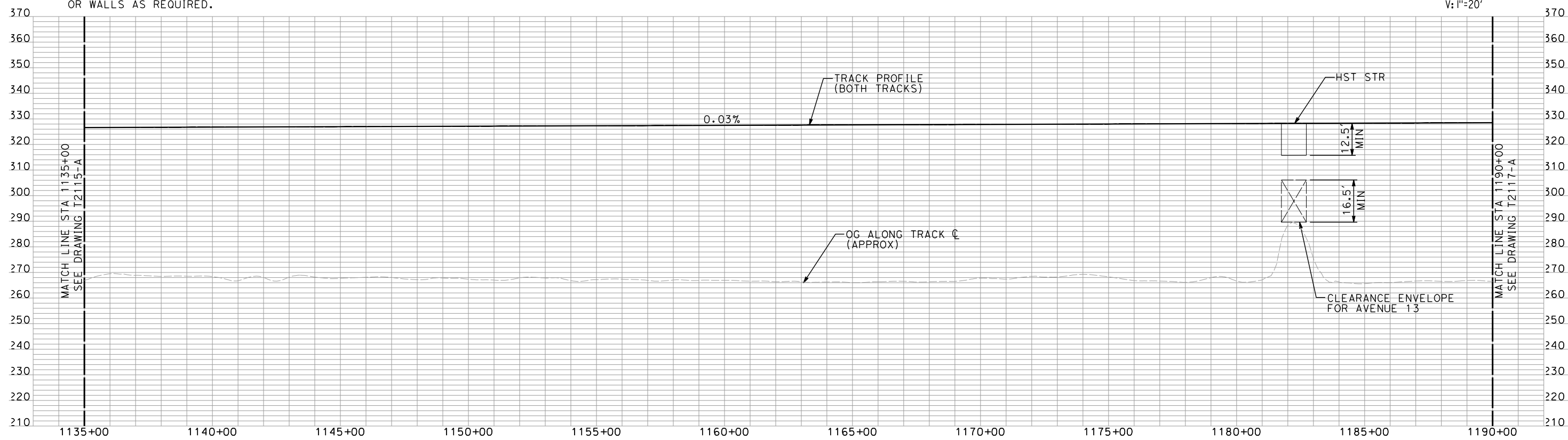
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shieldsa



NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

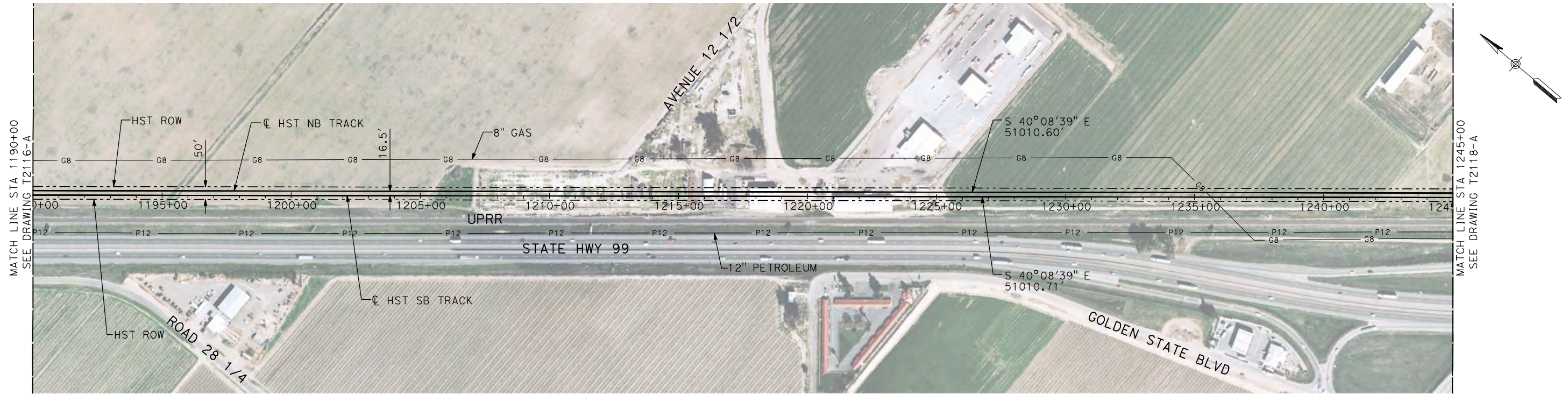


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1135+00 TO STA 1190+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2116-A
SCALE
AS SHOWN
SHEET NO.
OF

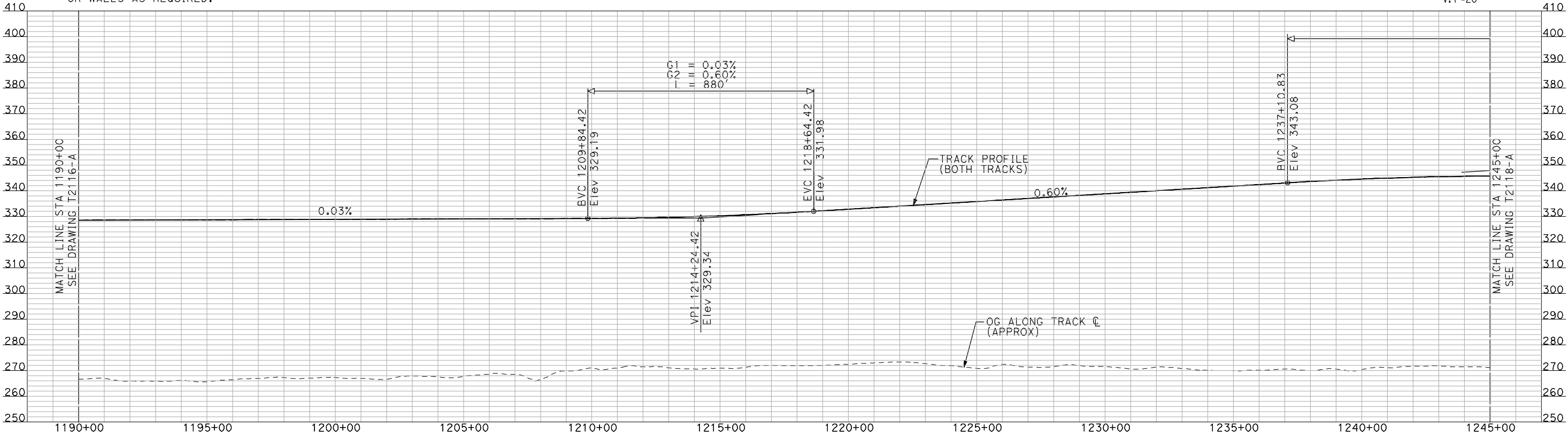
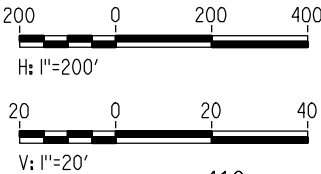
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NOTES:

- 1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



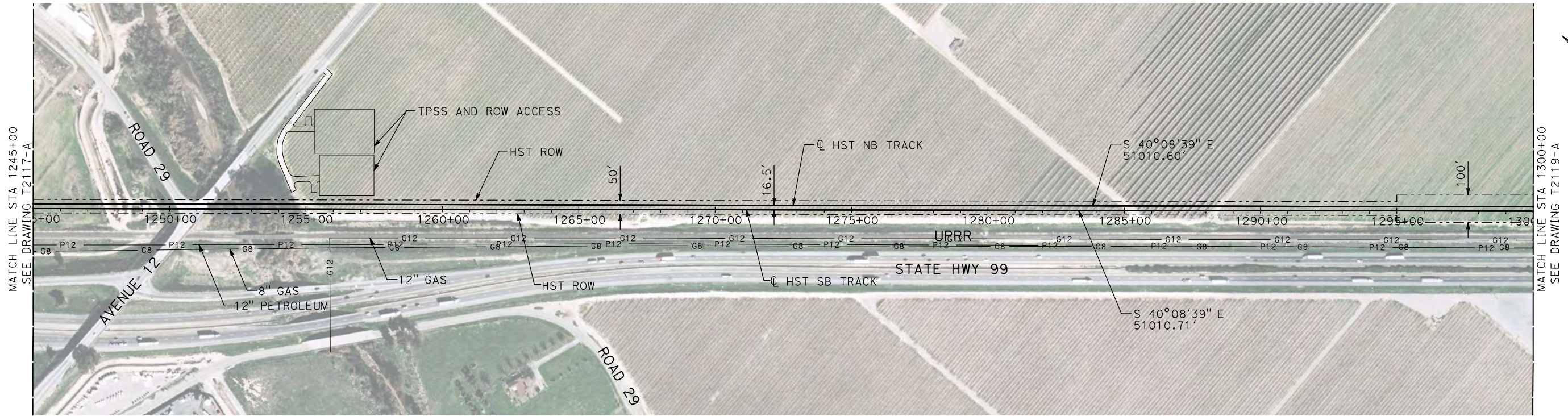
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1190+00 TO STA 1245+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2117-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

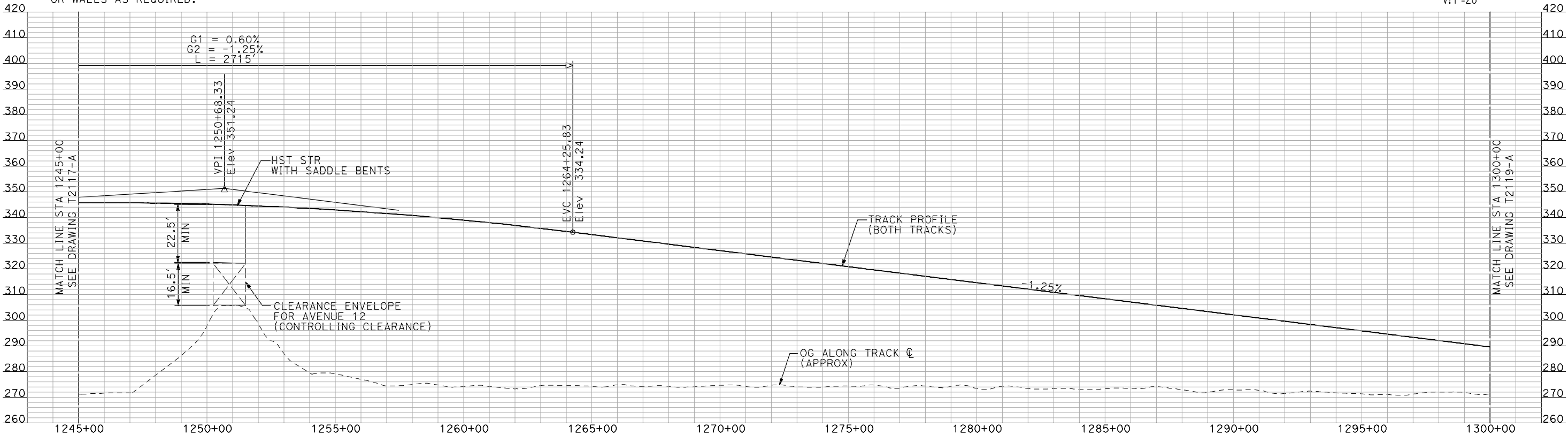
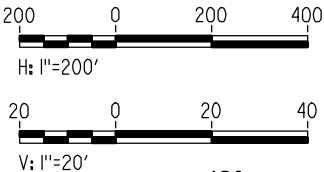
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NOTES:

- 1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

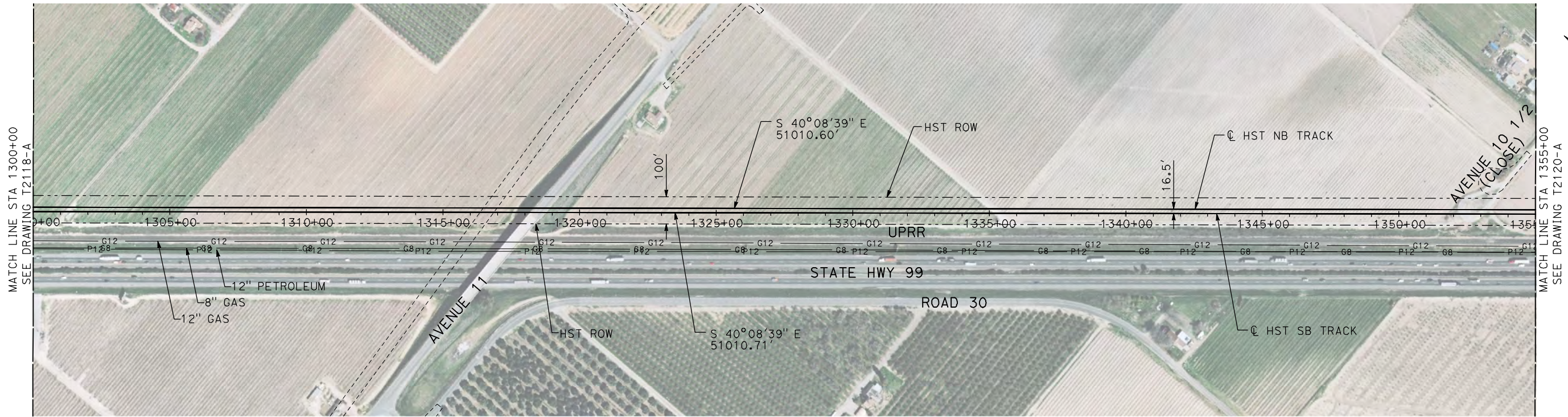


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1245+00 TO STA 1300+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2118-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

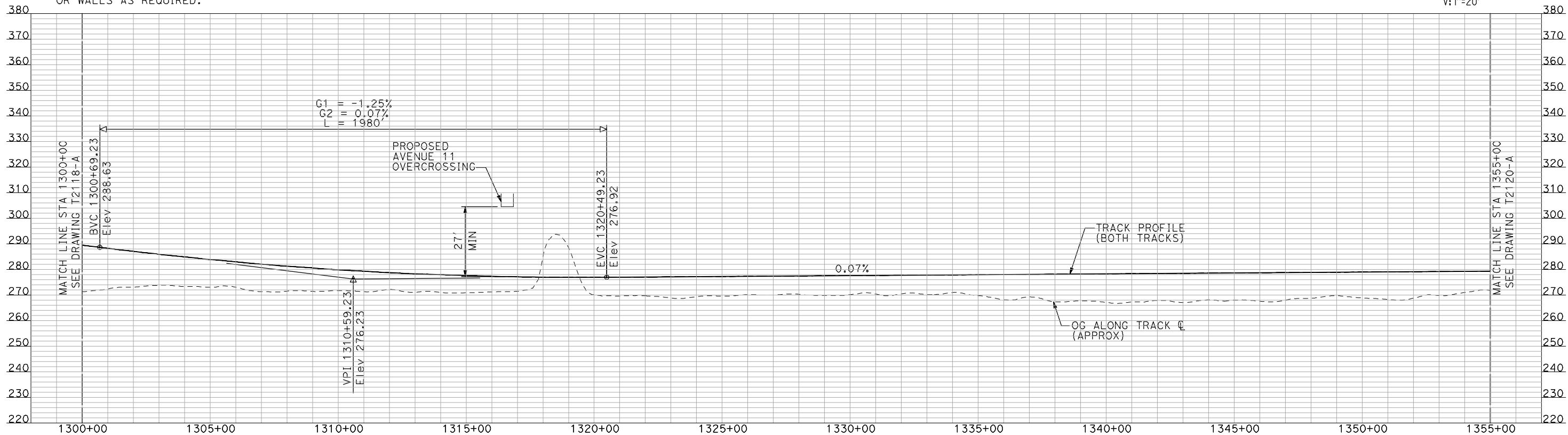
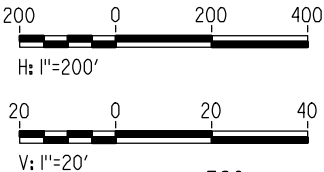
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



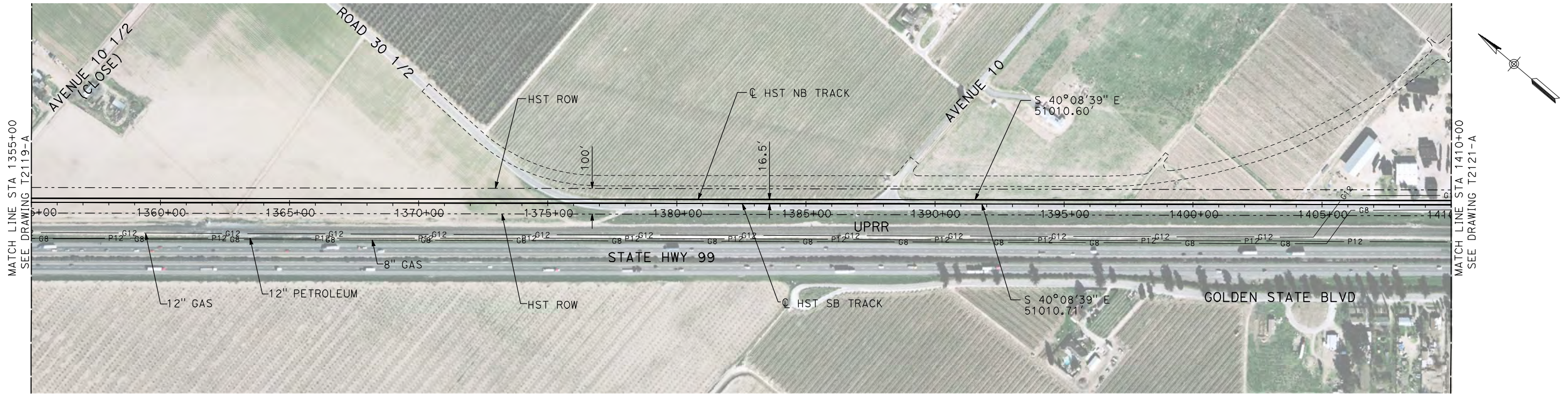
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1300+00 TO STA 1355+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2119-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

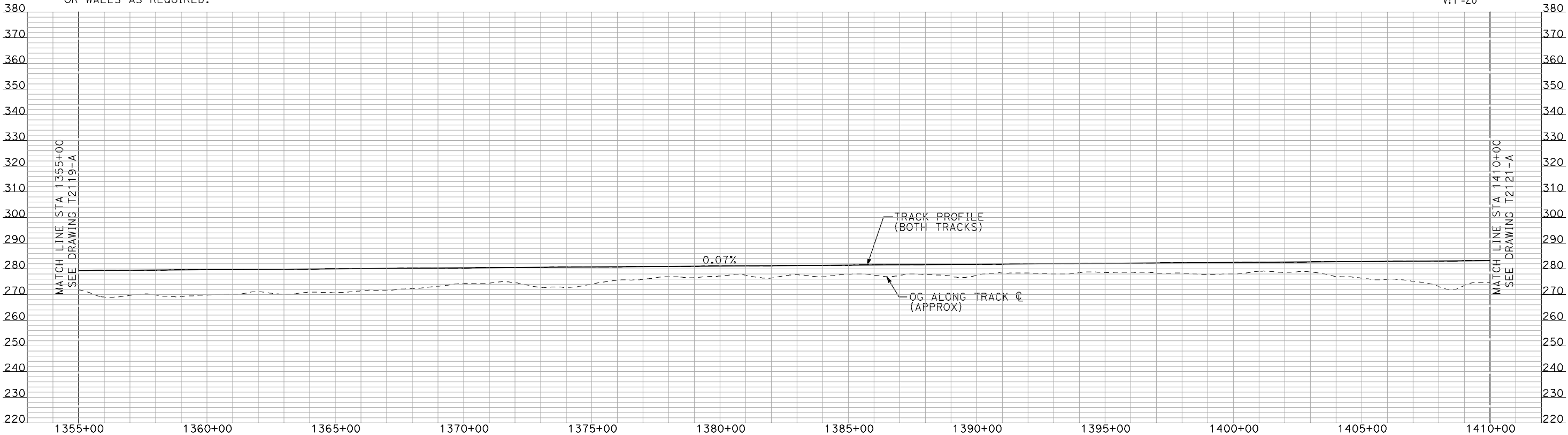
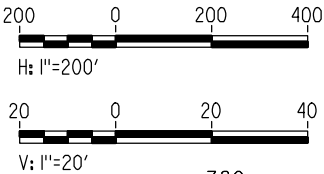
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NOTES:

- 1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

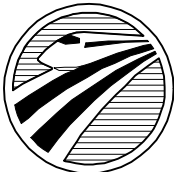
"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



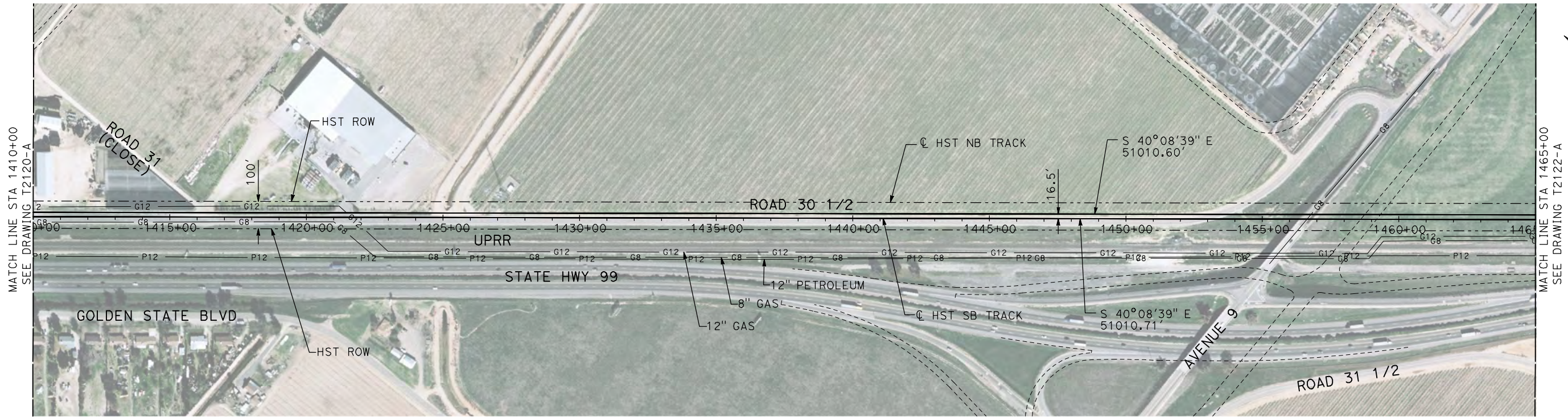
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1355+00 TO STA 1410+00

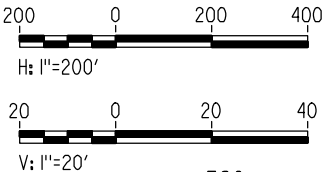
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- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

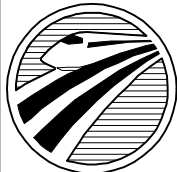
"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



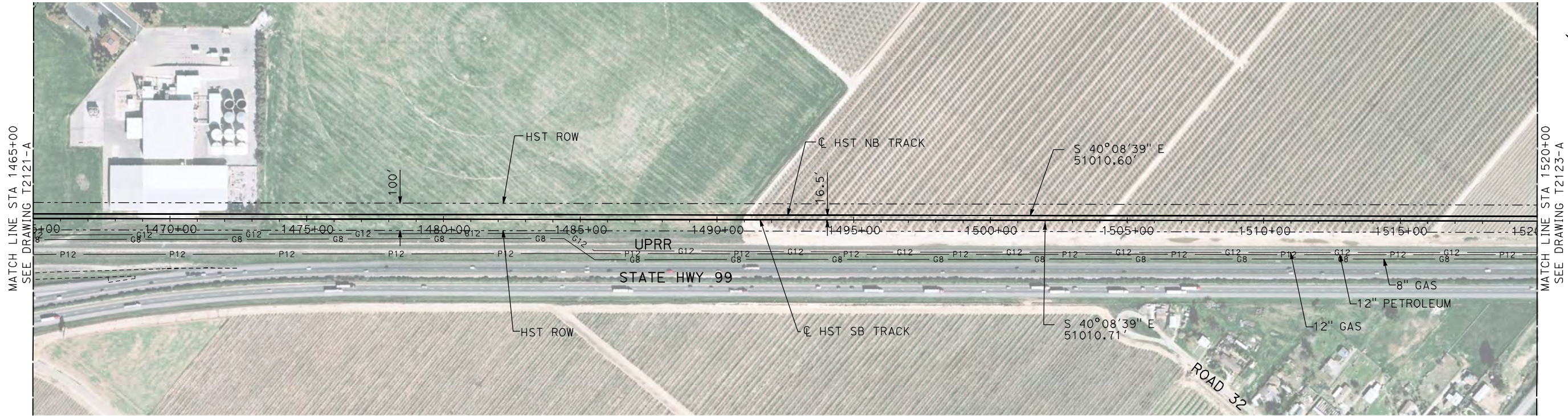
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1410+00 TO STA 1465+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2121-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

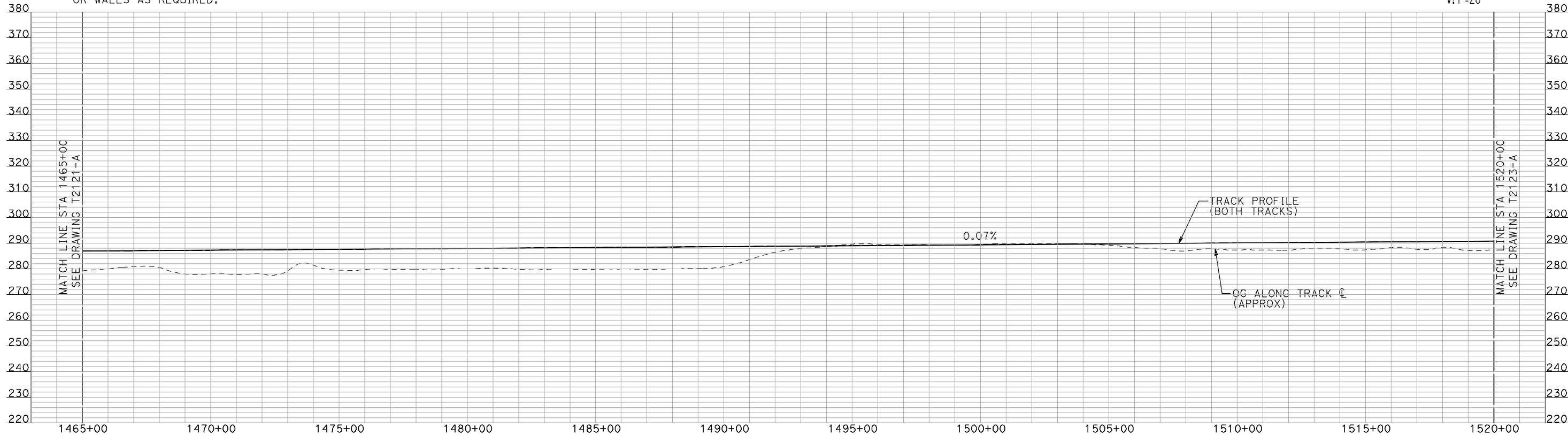
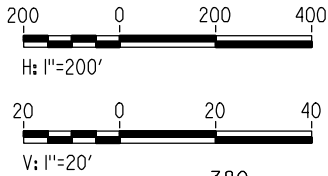
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



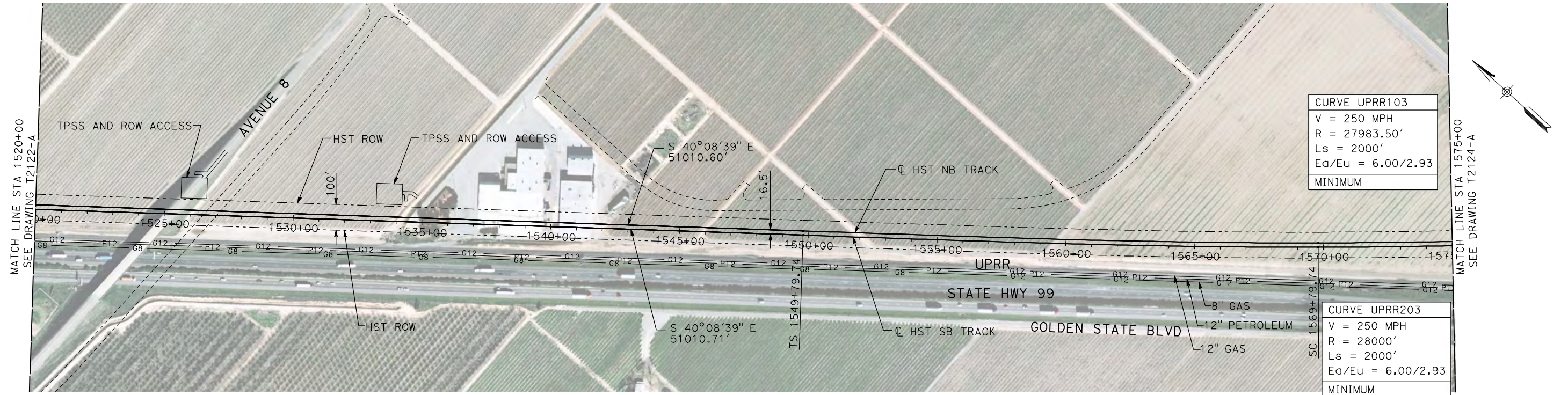
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1465+00 TO STA 1520+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2122-A |
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| SHEET NO. ### OF ### |

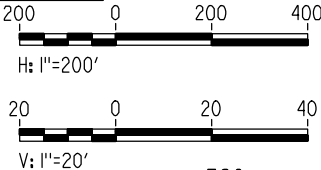
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



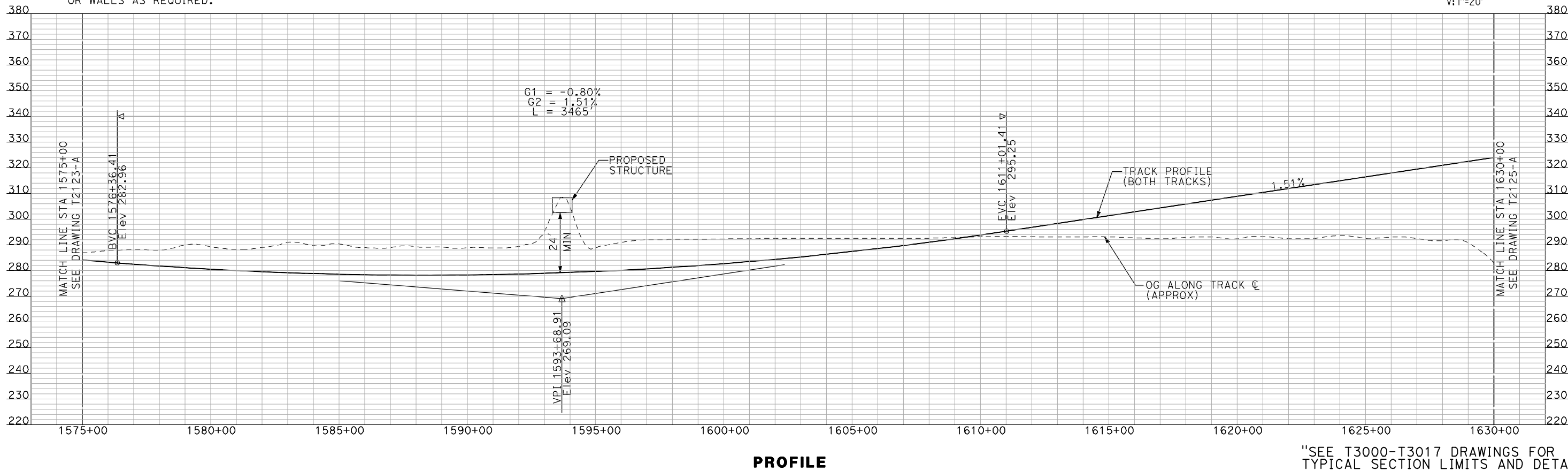
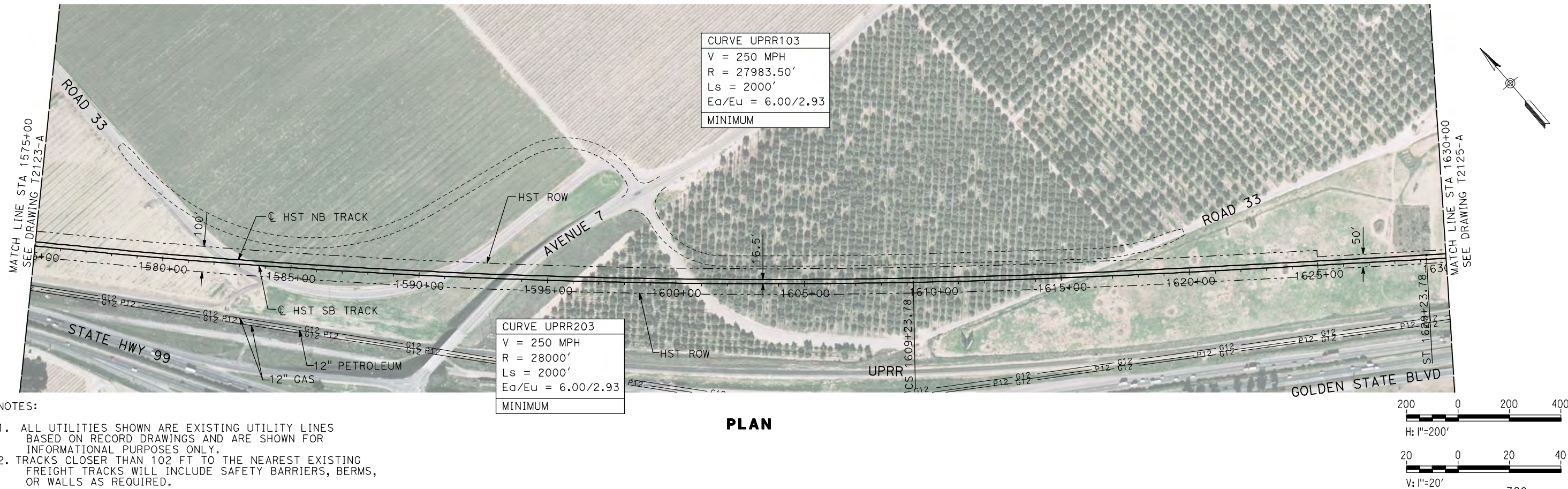
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1520+00 TO STA 1575+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2123-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL

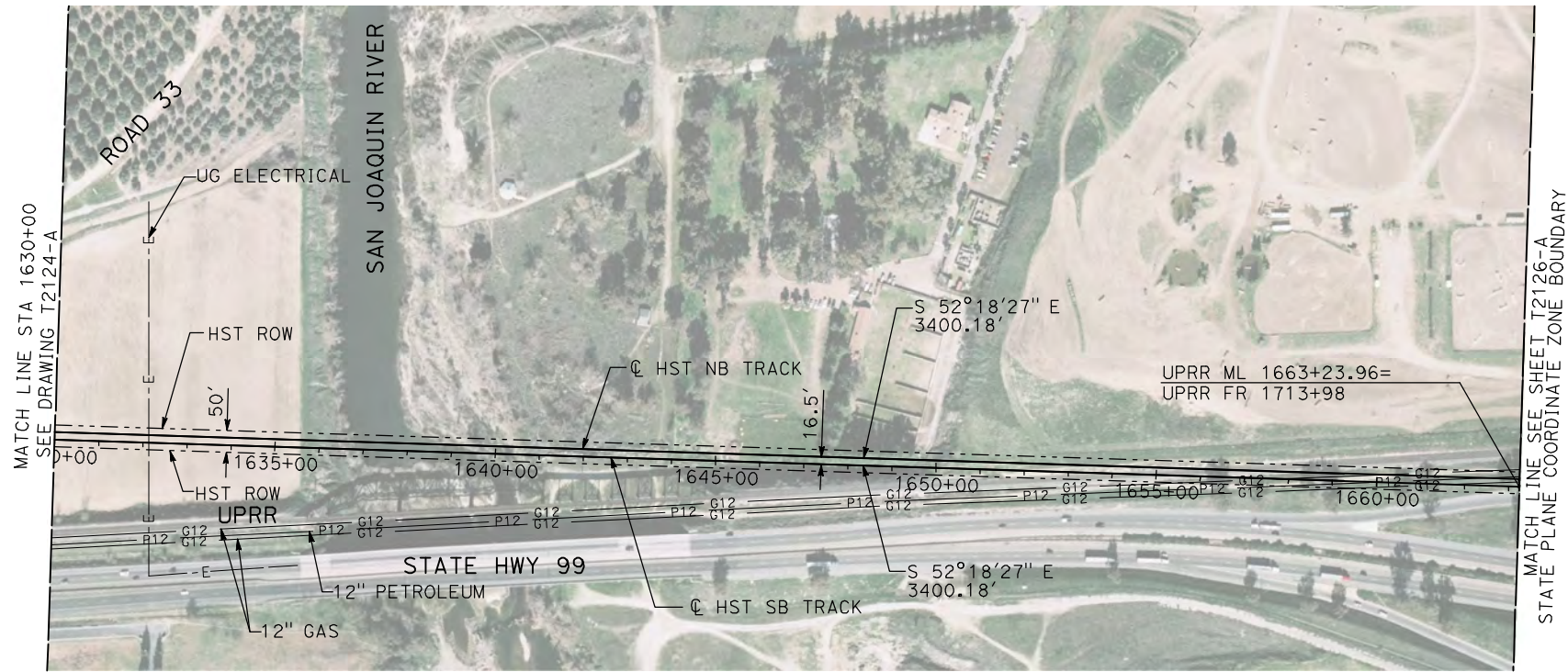


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1575+00 TO STA 1630+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2124-A
SCALE
AS SHOWN
SHEET NO.
OF

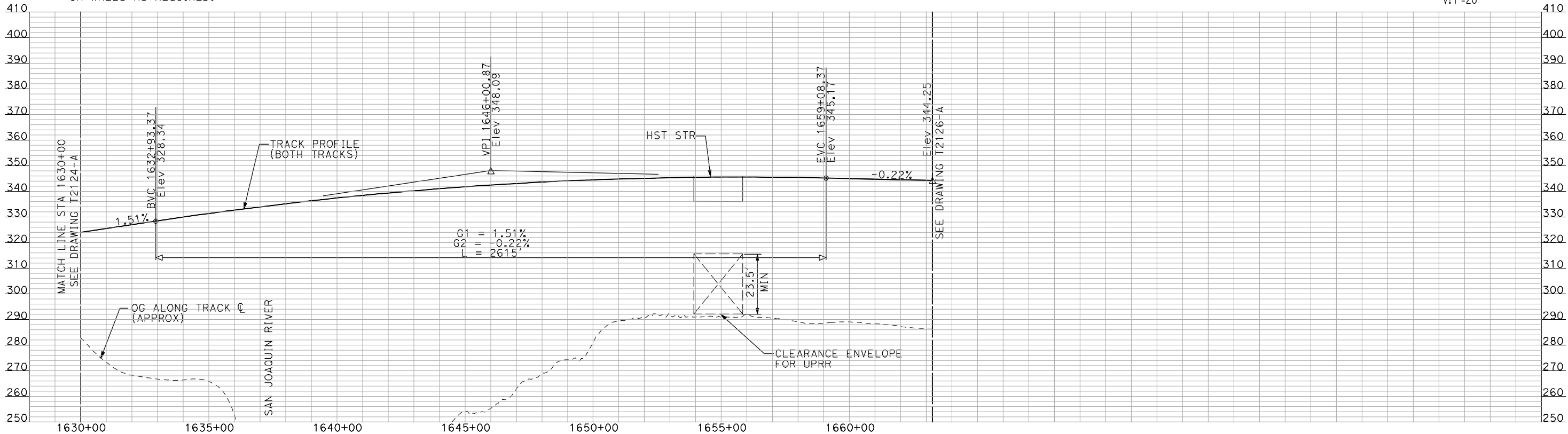
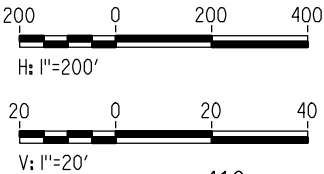
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

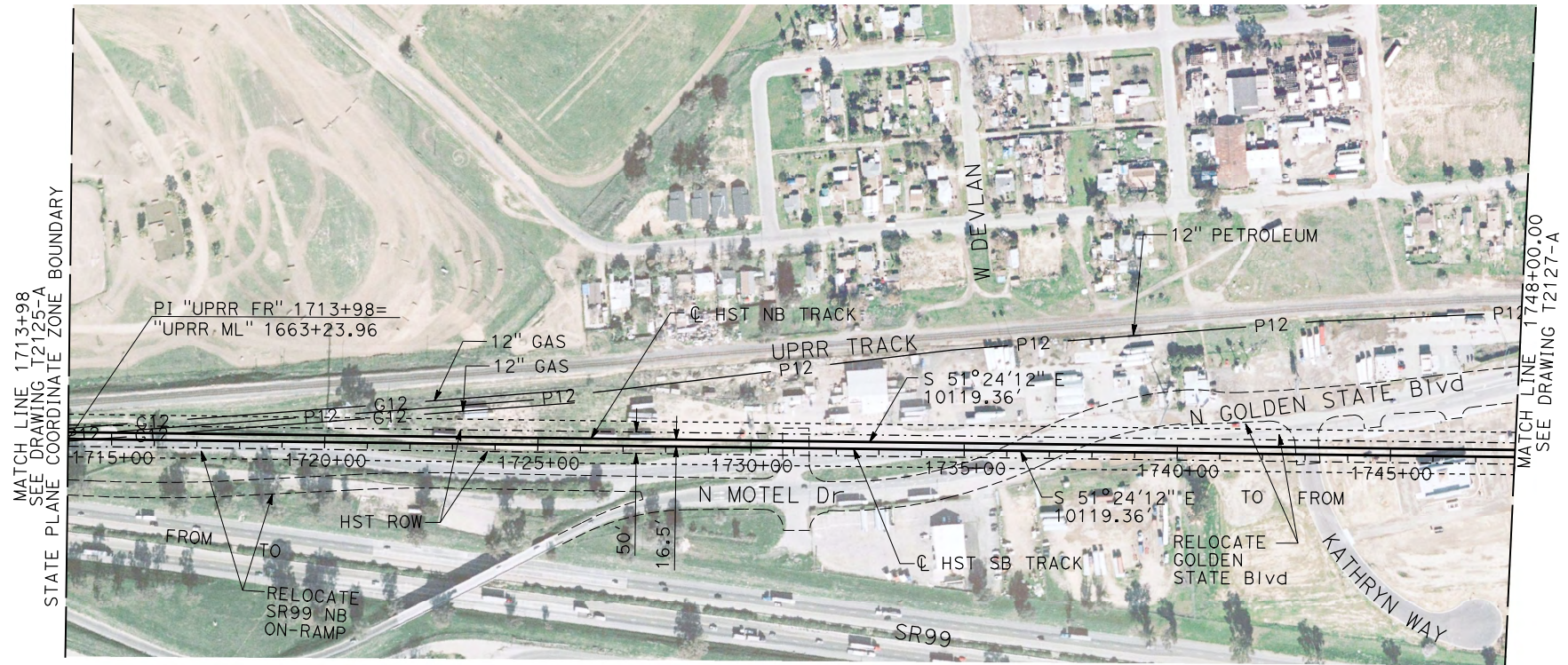
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CONSTRUCTION



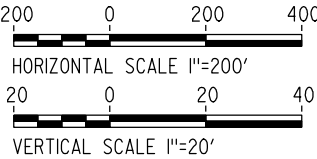
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MAIN LINE

PLAN AND PROFILE
STA 1630+00 TO STA 1663+23.96

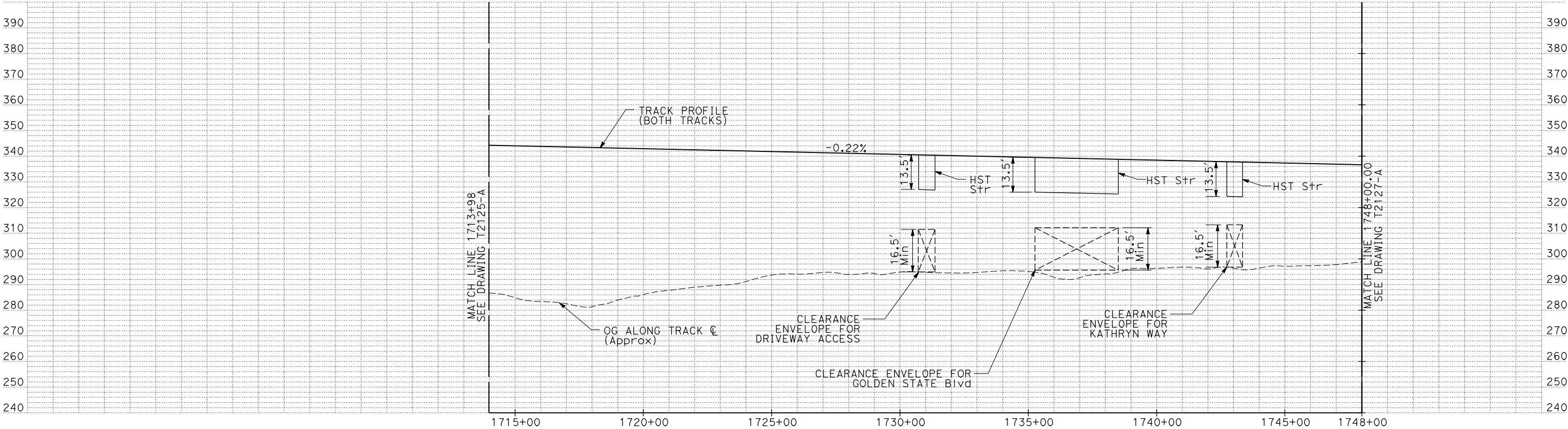
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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2125-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |



PLAN



- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



PROFILE

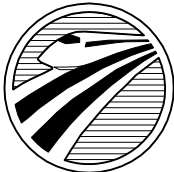
"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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|---------------------------|
| DESIGNED BY C. CHIU |
| DRAWN BY M. MCKEON |
| CHECKED BY V. CHIO |
| IN CHARGE J. VALSECCHI |
| DATE JULY 2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

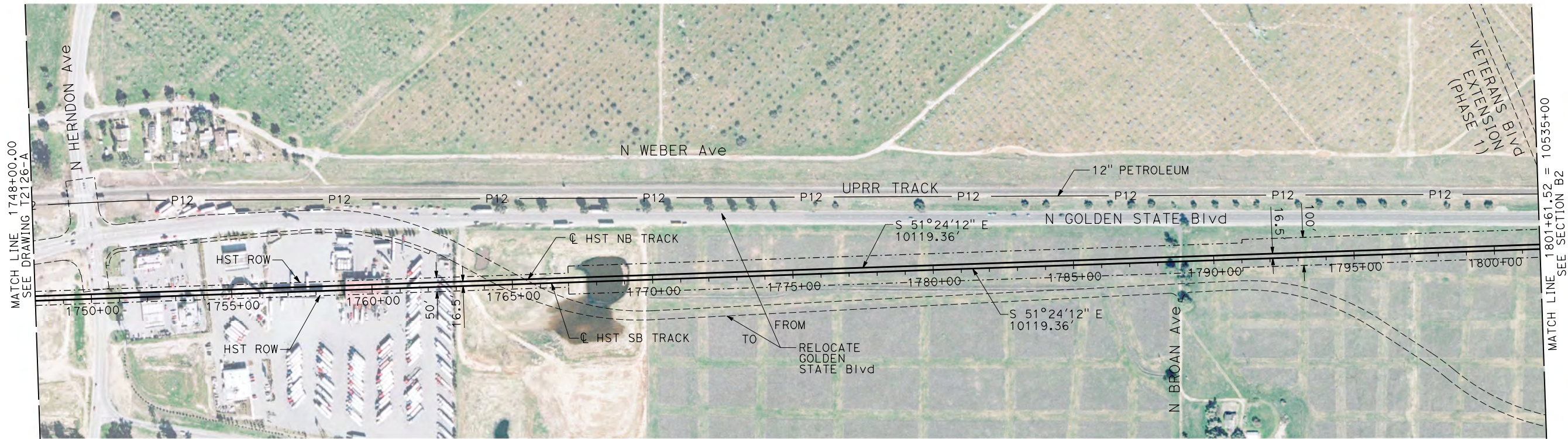
UPRR/SR99 MAIN LINE

PLAN AND PROFILE
STA 1713+98 TO STA 1748+00

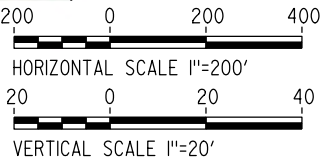
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| DRAWING NO. T2126-A |
| SCALE AS SHOWN |
| SHEET NO. |

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DGN FILE => MF-T-2126-A2-E

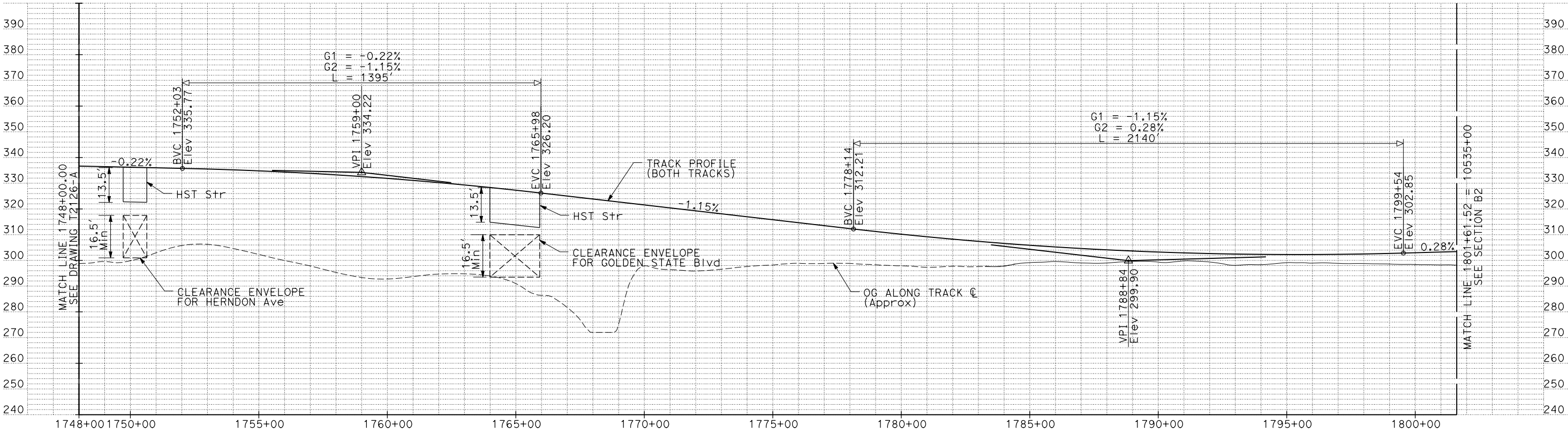
DATE PLOTTED => 20-JUL-2011
TIME PLOTTED => 10:26



PLAN



- NOTE:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY C. CHIU |
| DRAWN BY M. MCKEON |
| CHECKED BY V. CHIO |
| IN CHARGE J. VALSECCHI |
| DATE JULY 2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



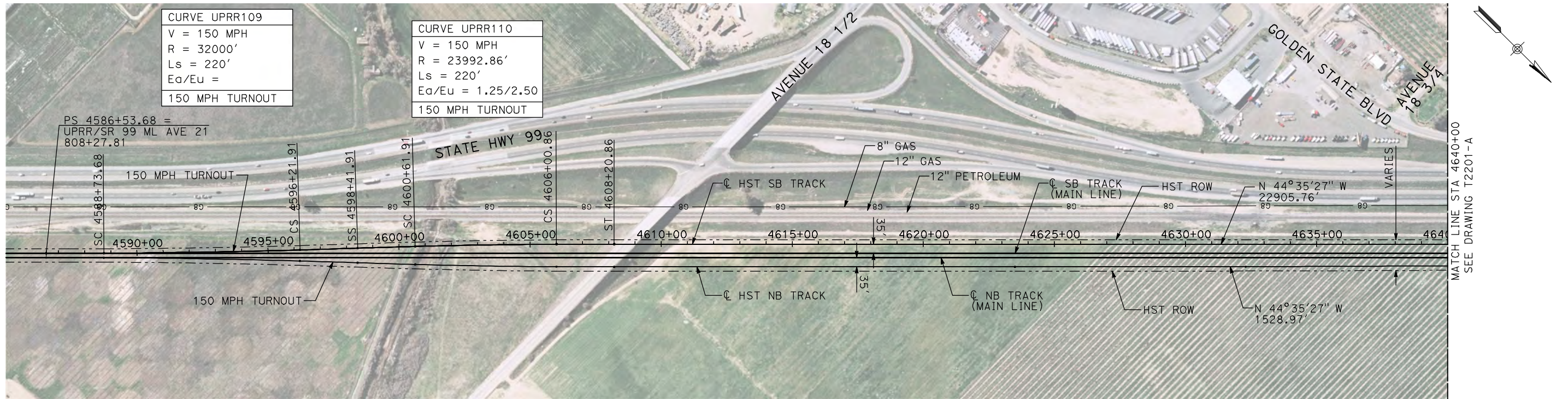
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR99 MAIN LINE

PLAN AND PROFILE
STA 1748+00 TO STA 1801+61.52

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| SHEET NO. |

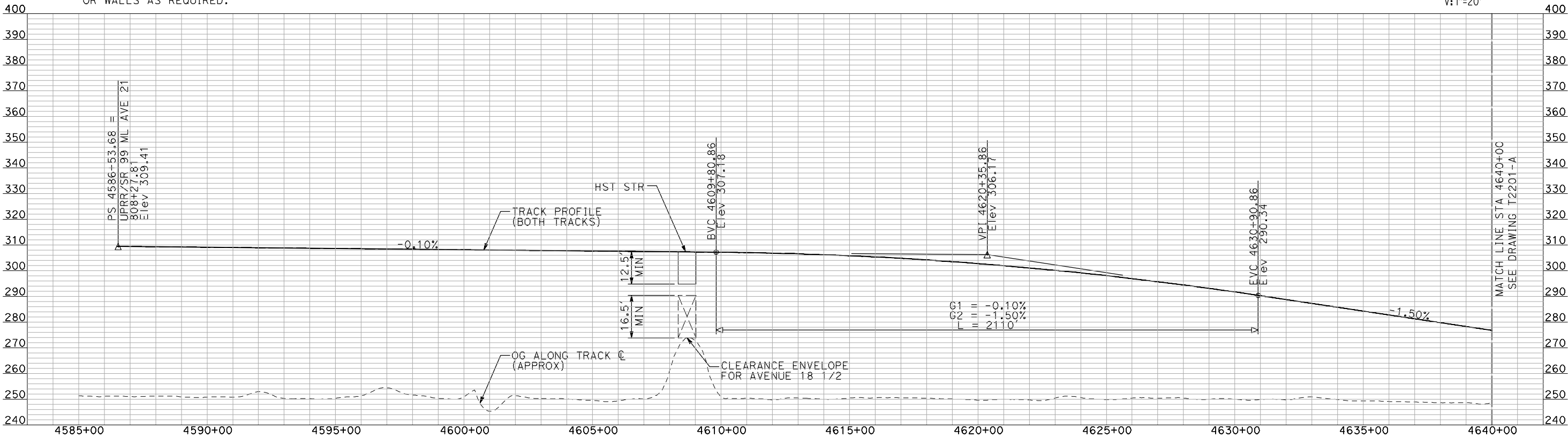
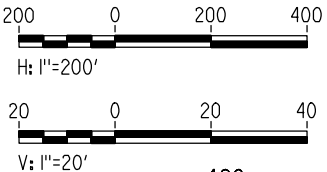
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2M HILL

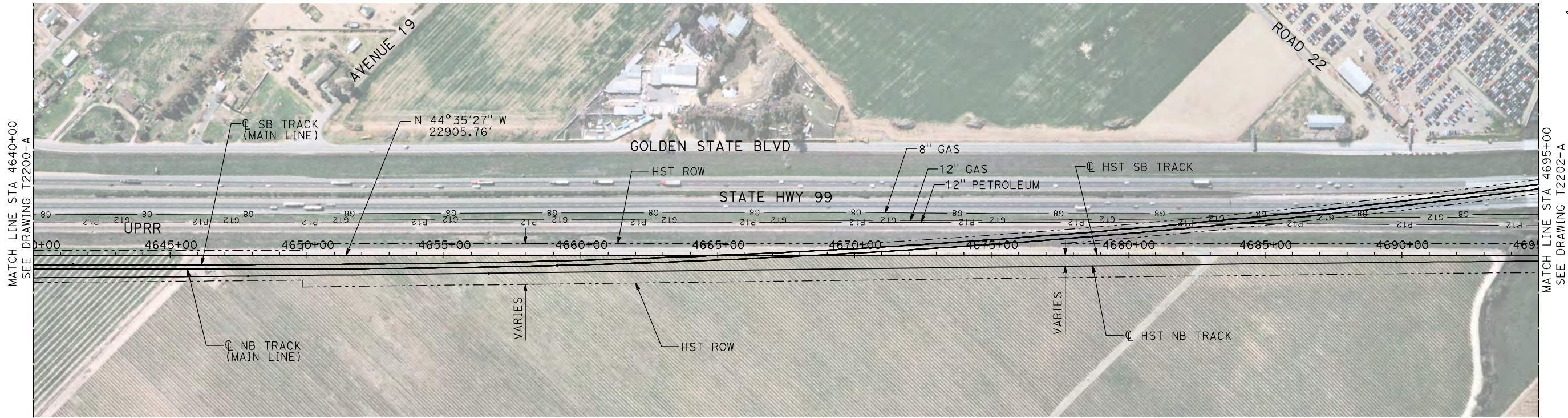


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 4586+53.68 TO STA 4640+00

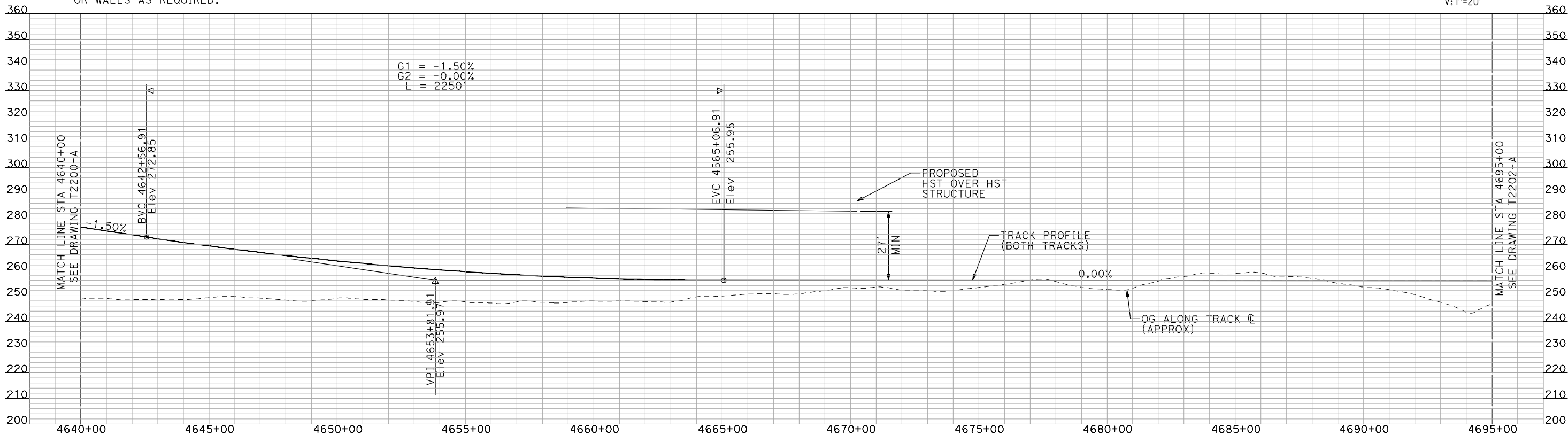
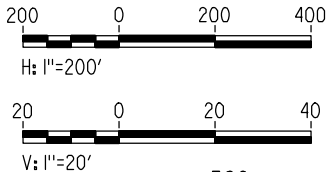
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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2200-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |



NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



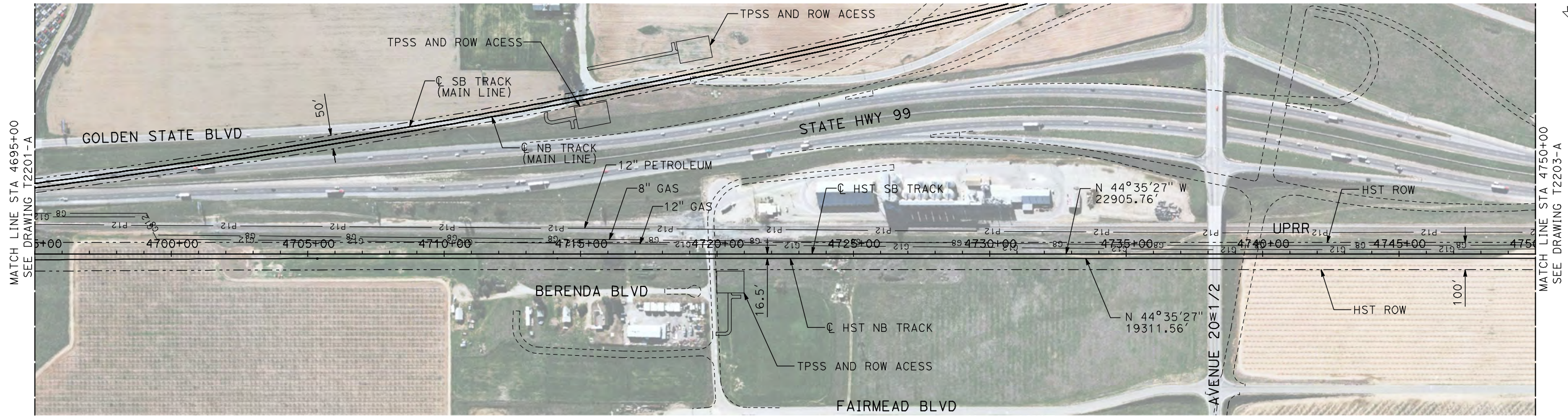
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 4640+00 TO STA 4695+00

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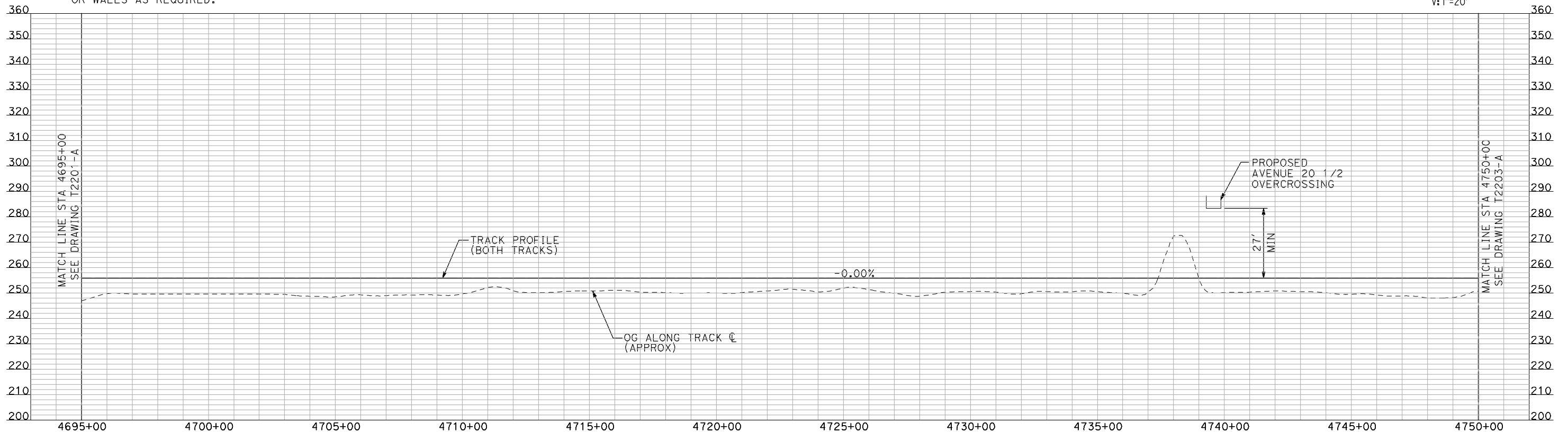
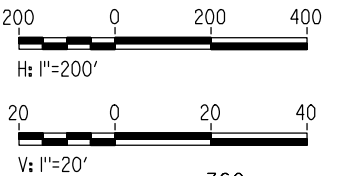
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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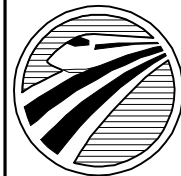
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| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Sacramento, CA 95811

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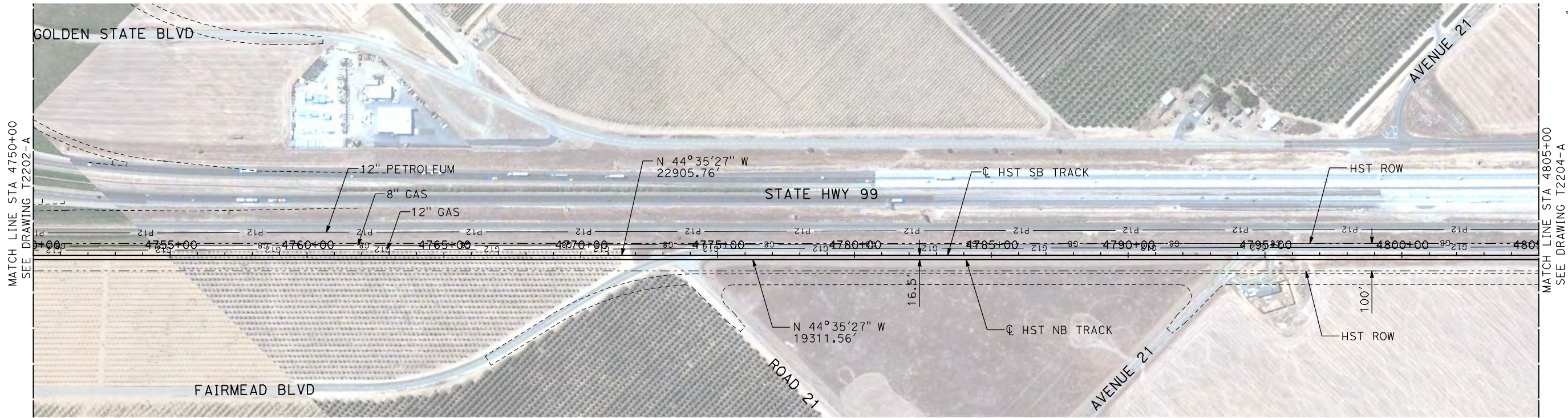
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 4695+00 TO STA 4750+00

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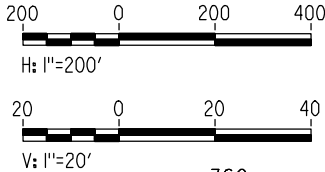
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

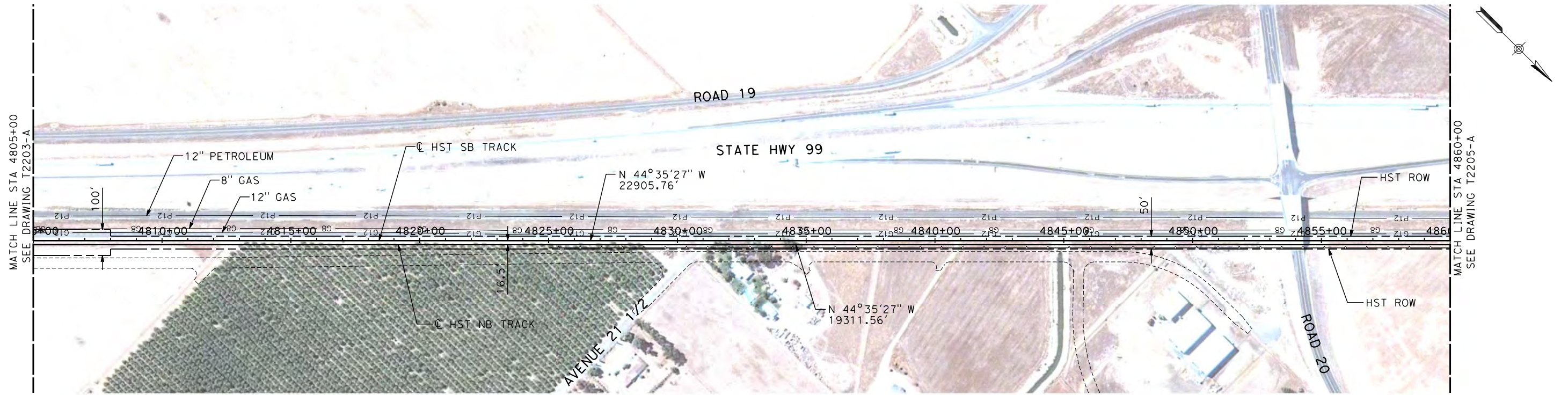
AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MERCED CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 4750+00 TO STA 4805+00

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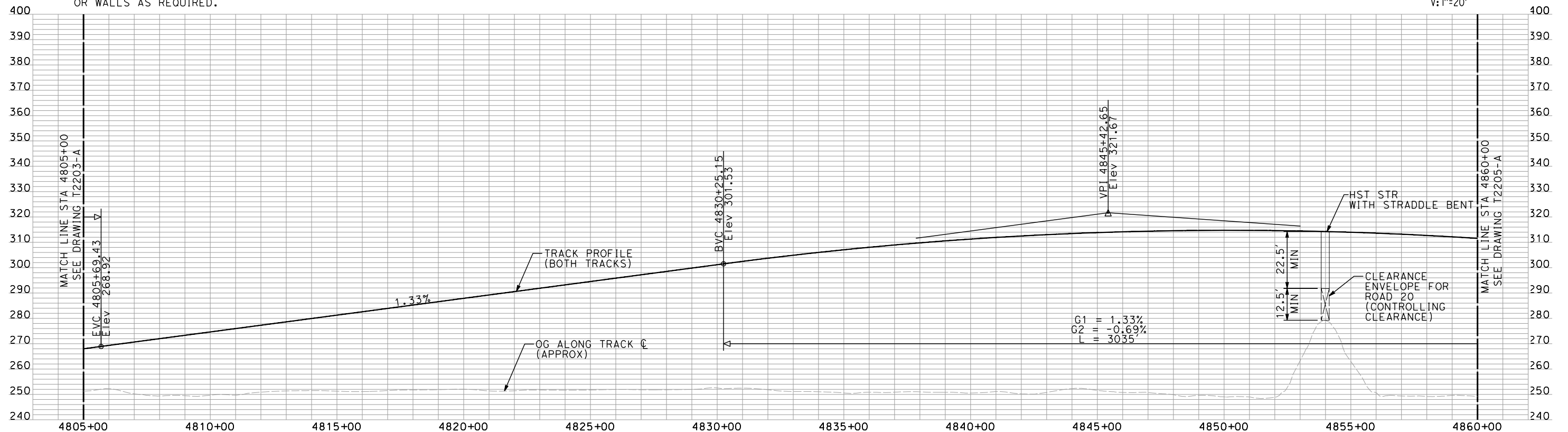
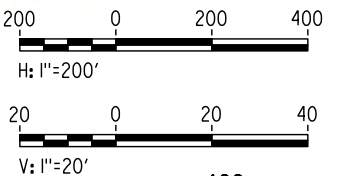
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|----------|----|-----|-----|----------------------|
| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

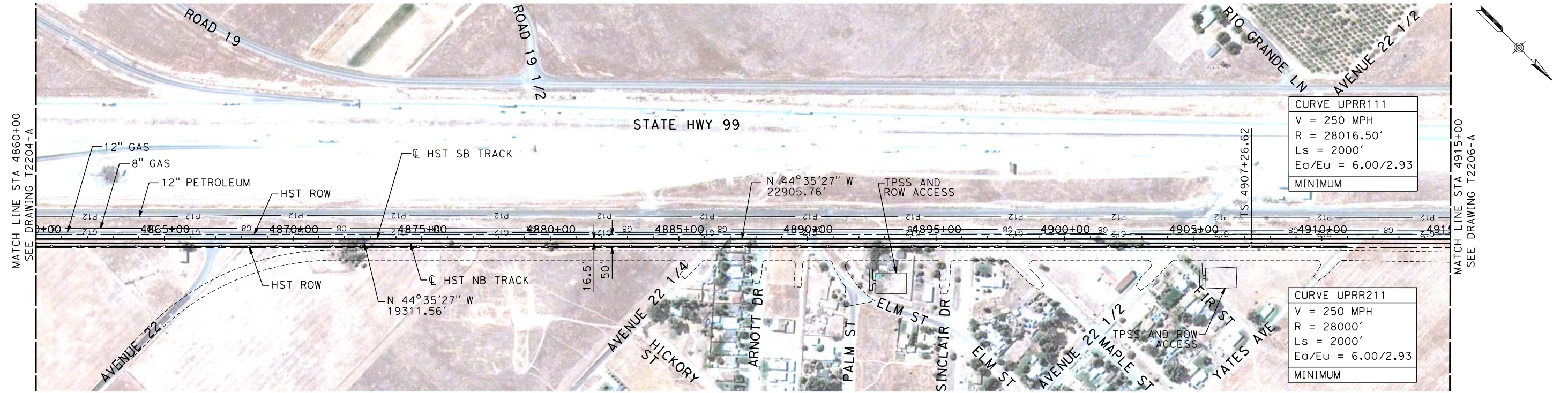
AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MERCED CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 4805+00 TO STA 4860+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2204-A
SCALE
AS SHOWN
SHEET NO.
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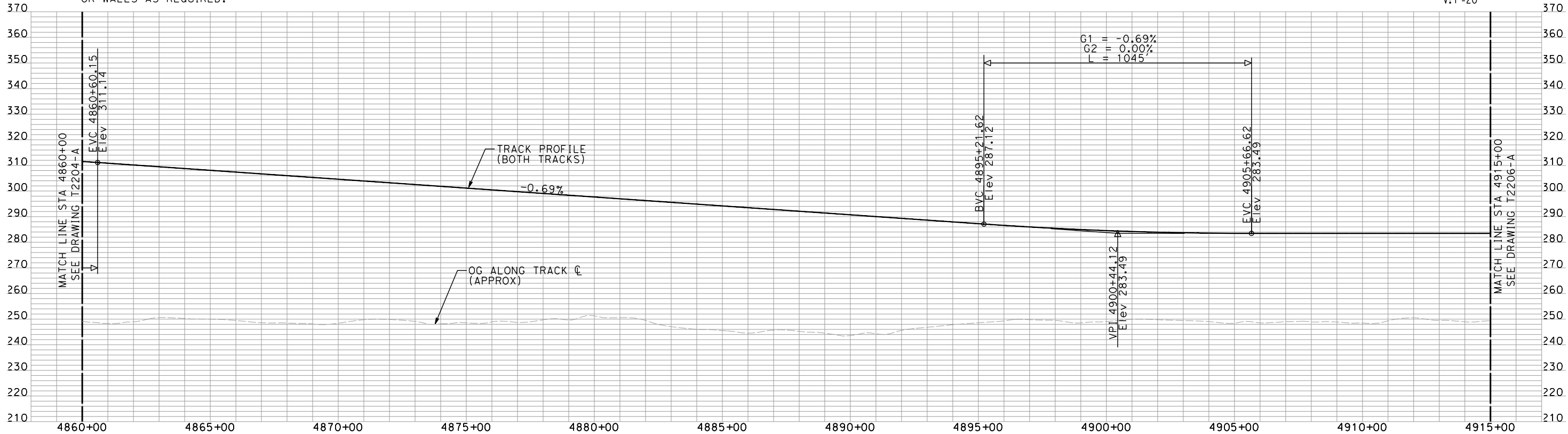
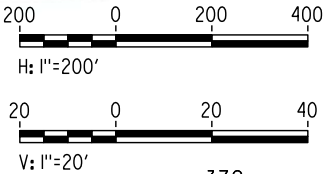
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| 1 | 02/17/12 | | | | NOISE BARRIER LIMITS |

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

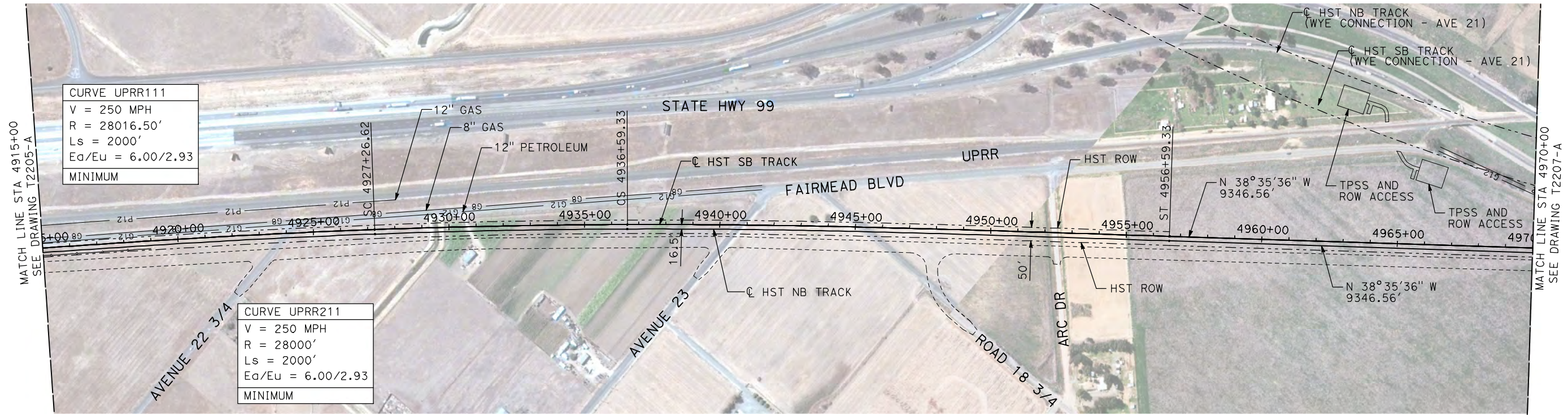
AECOM
Technical Services, Inc.
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Sacramento, CA 95811
CH2MHILL



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MERCED CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 4860+00 TO STA 4915+00

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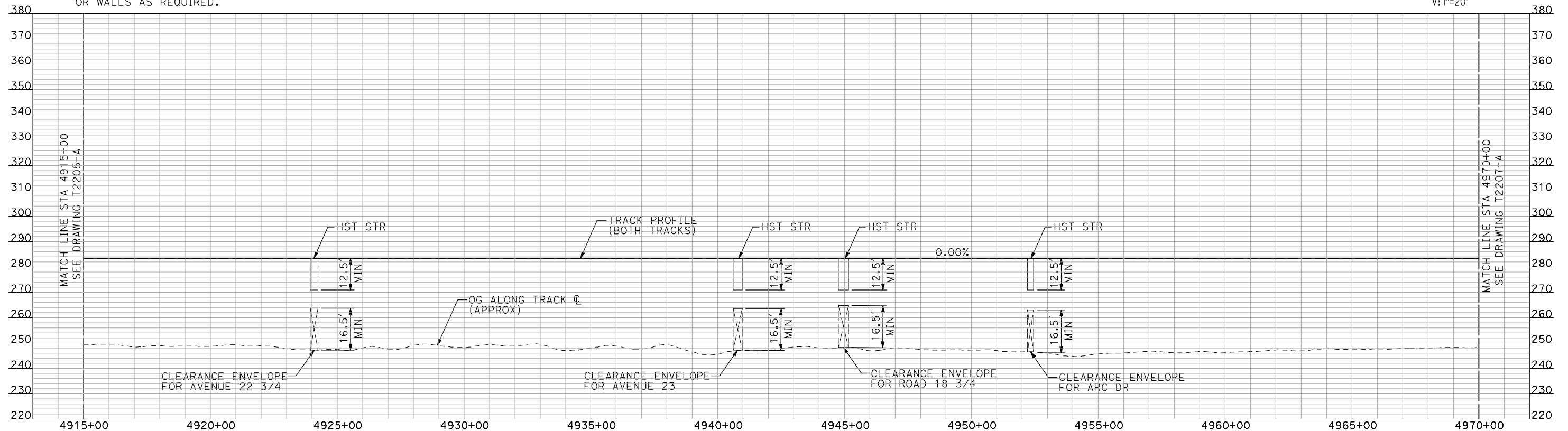
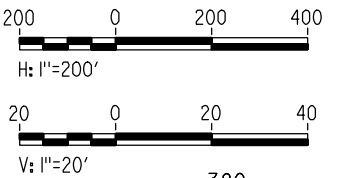
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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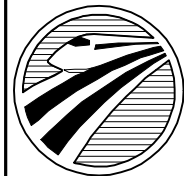
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| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Technical Services, Inc.
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Sacramento, CA 95811

CH2M HILL



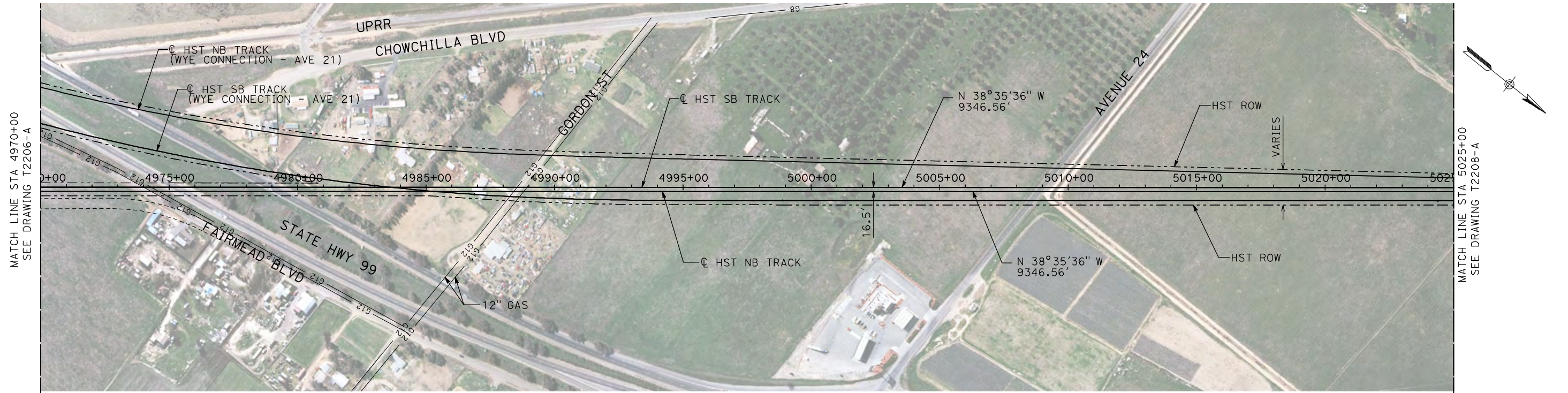
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 4915+00 TO STA 4970+00

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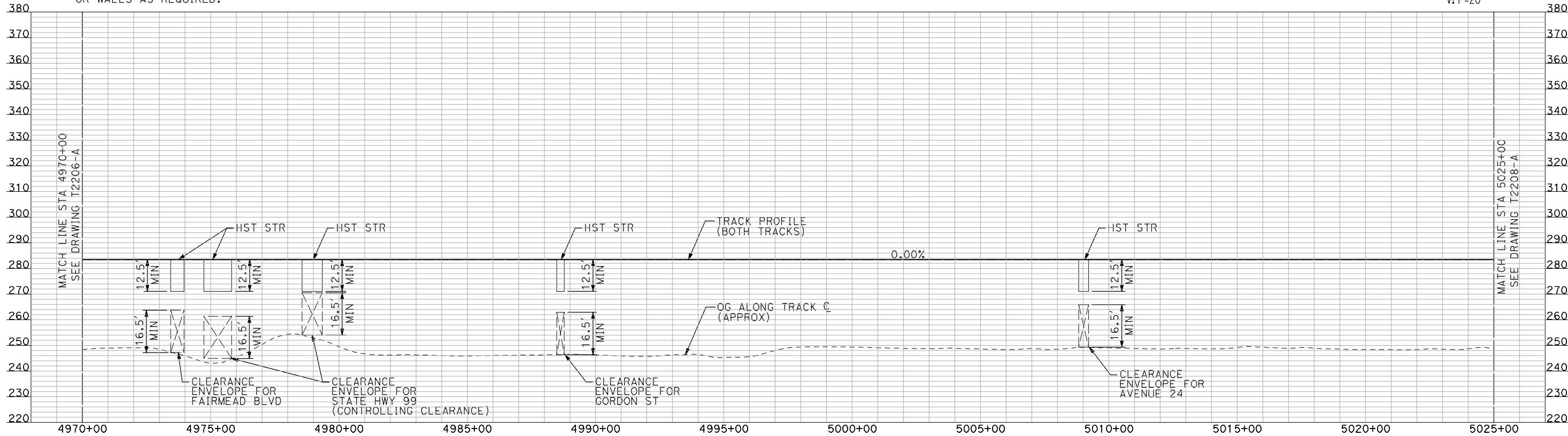
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

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SUBMITTAL

NOT FOR
CONSTRUCTION



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

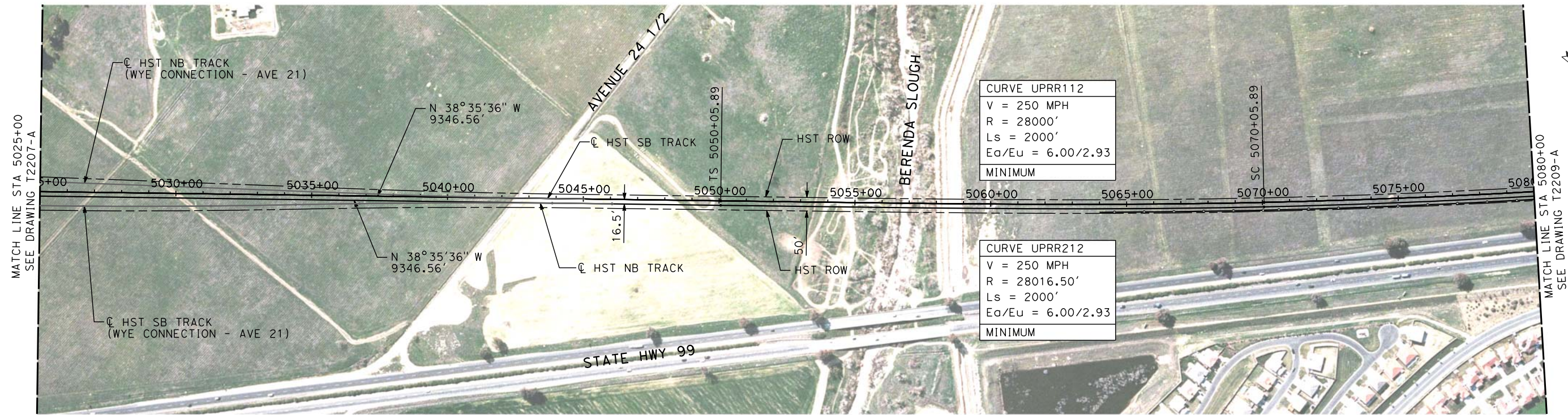
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 4970+00 TO STA 5025+00

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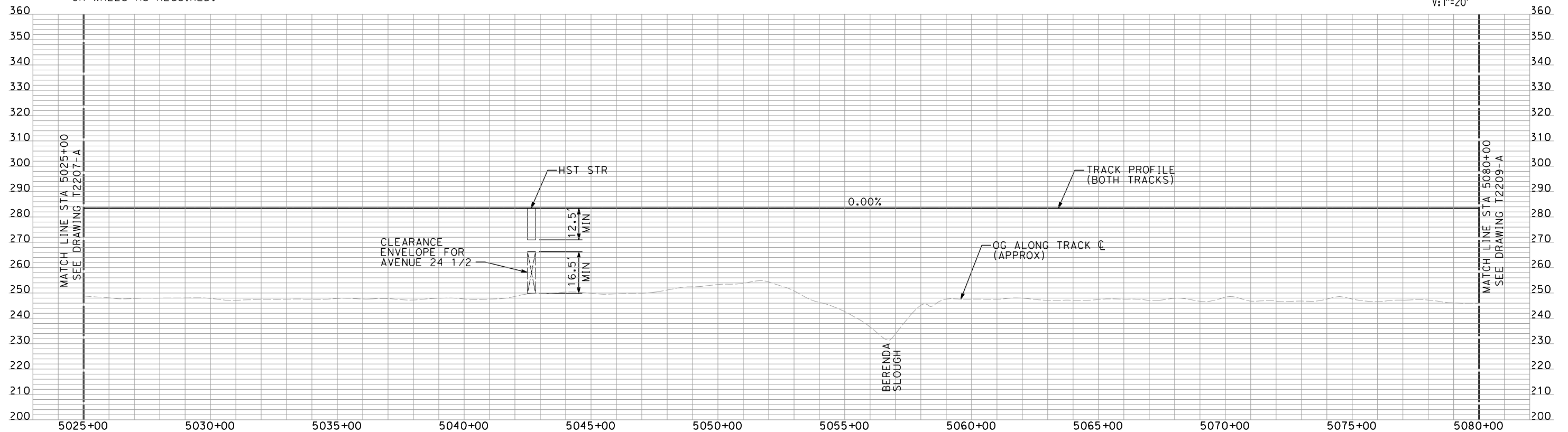
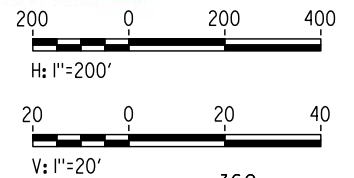
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| 1 | 02/17/12 | AS | | | NOISE BARRIER LIMITS |

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



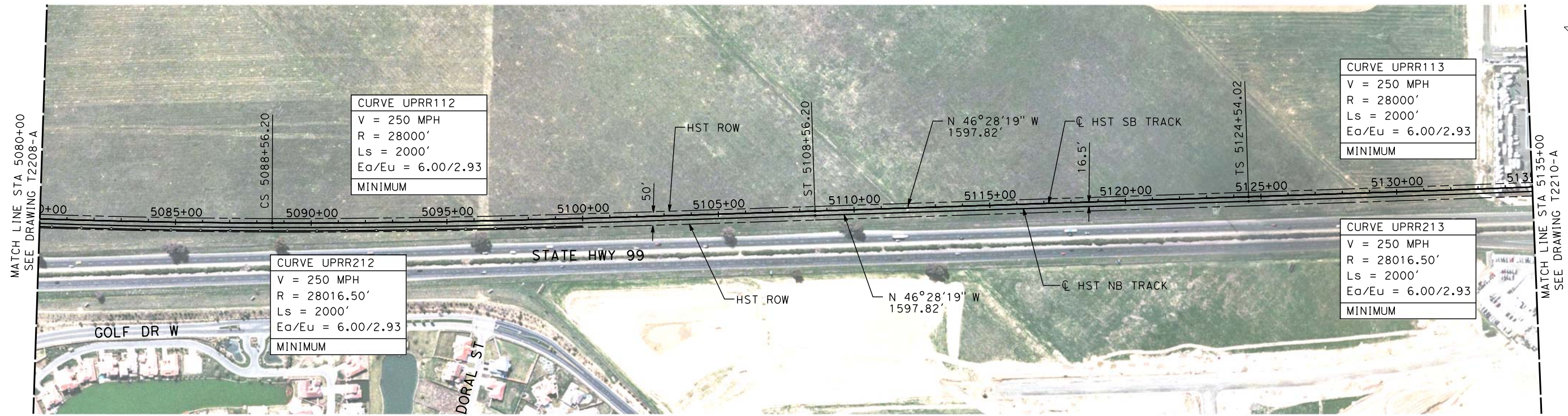
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5025+00 TO STA 5080+00

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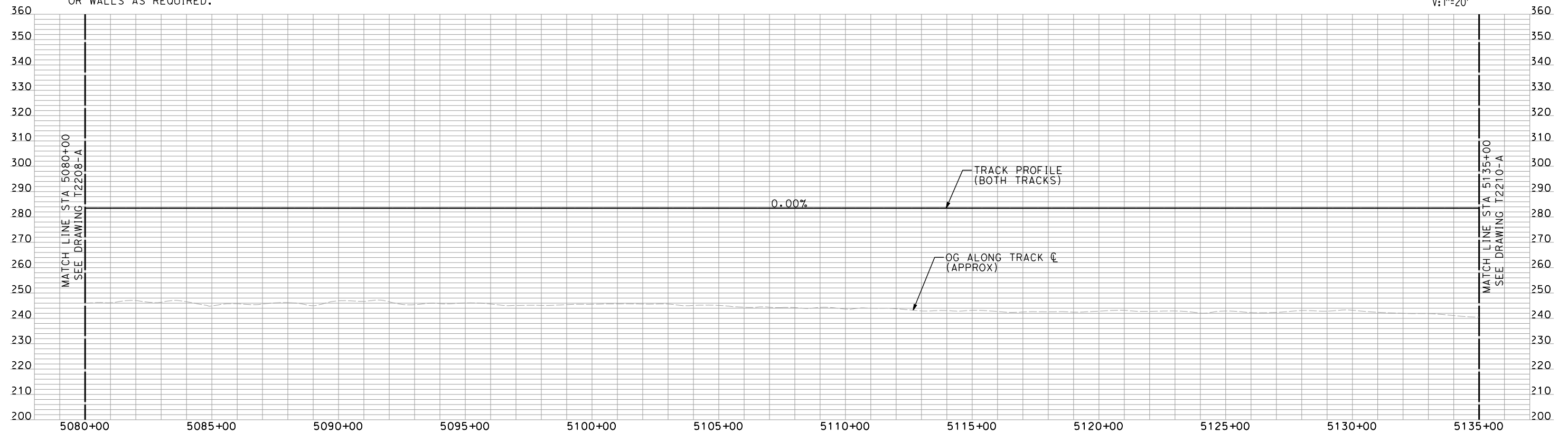
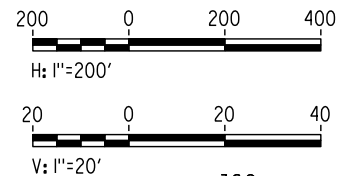
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| 1 | 02/17/12 | AS | | | NOISE BARRIER LIMITS |

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/27/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



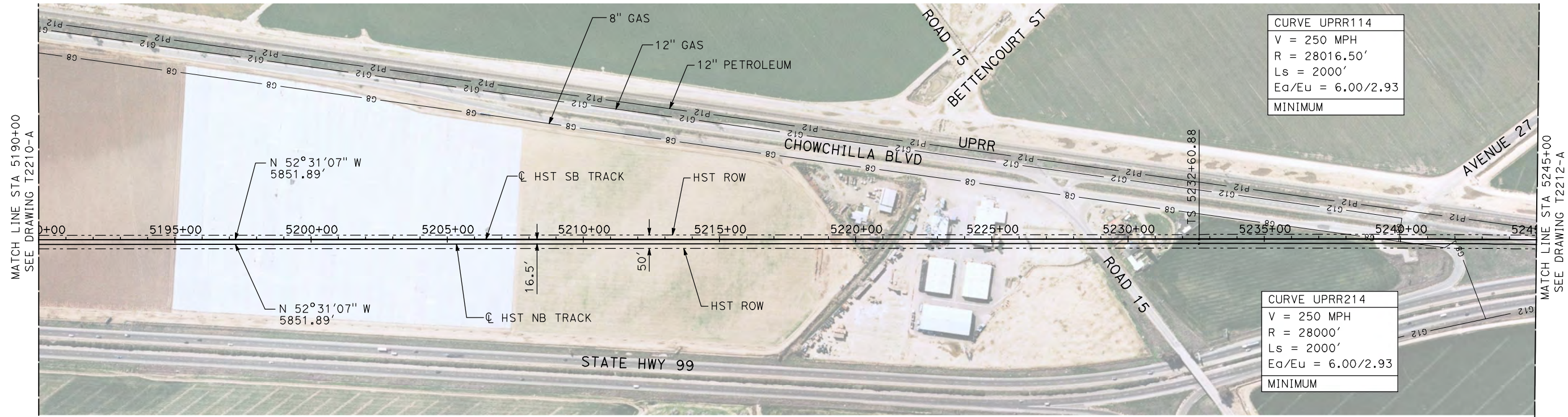
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5080+00 TO STA 5135+00

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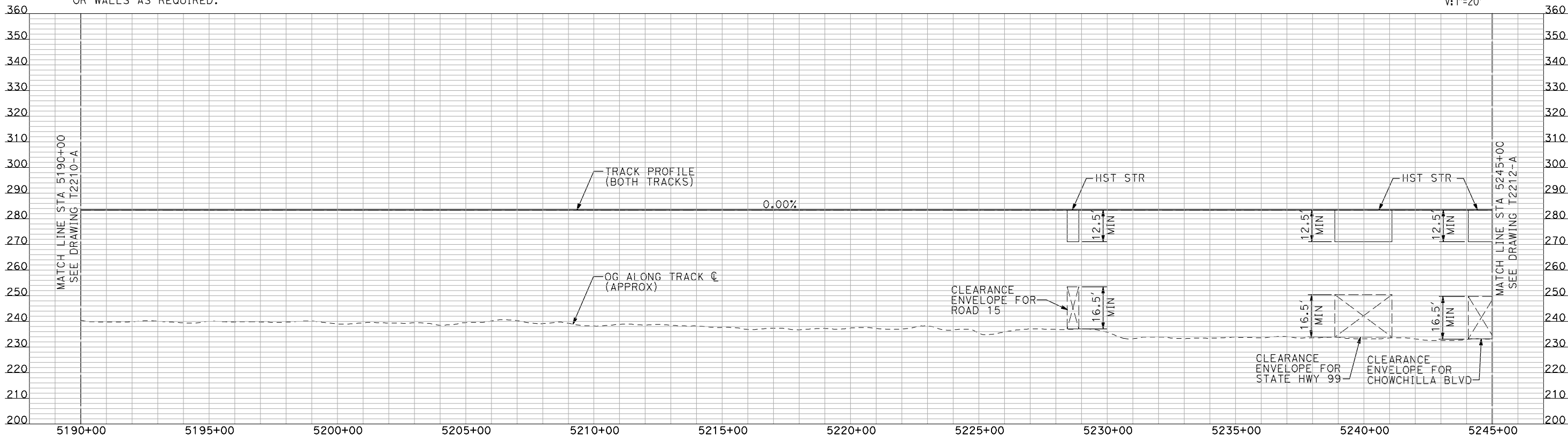
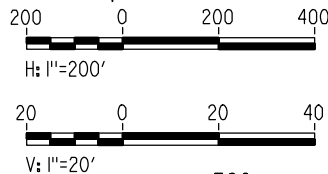
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

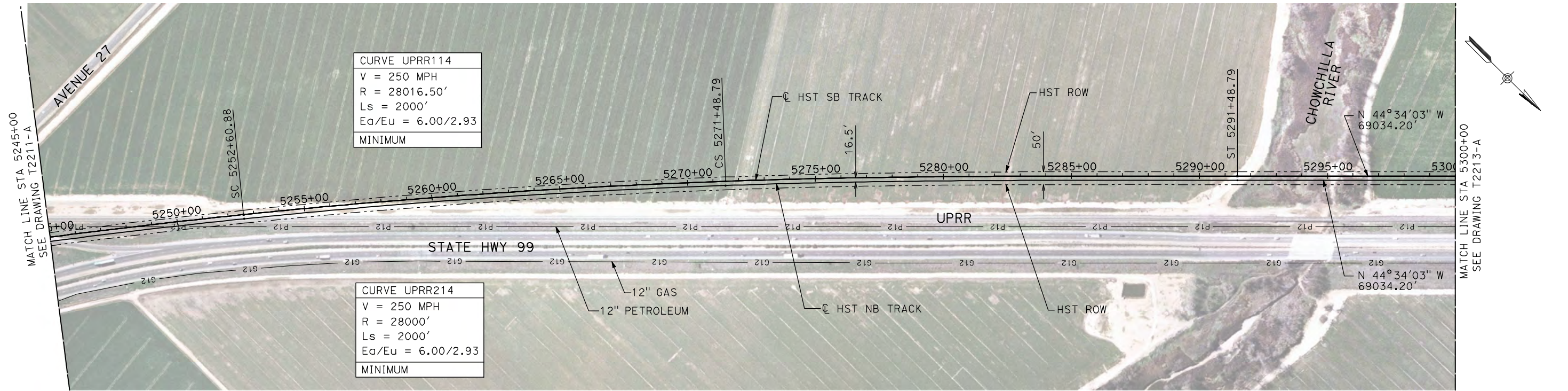
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5190+00 TO STA 5245+00

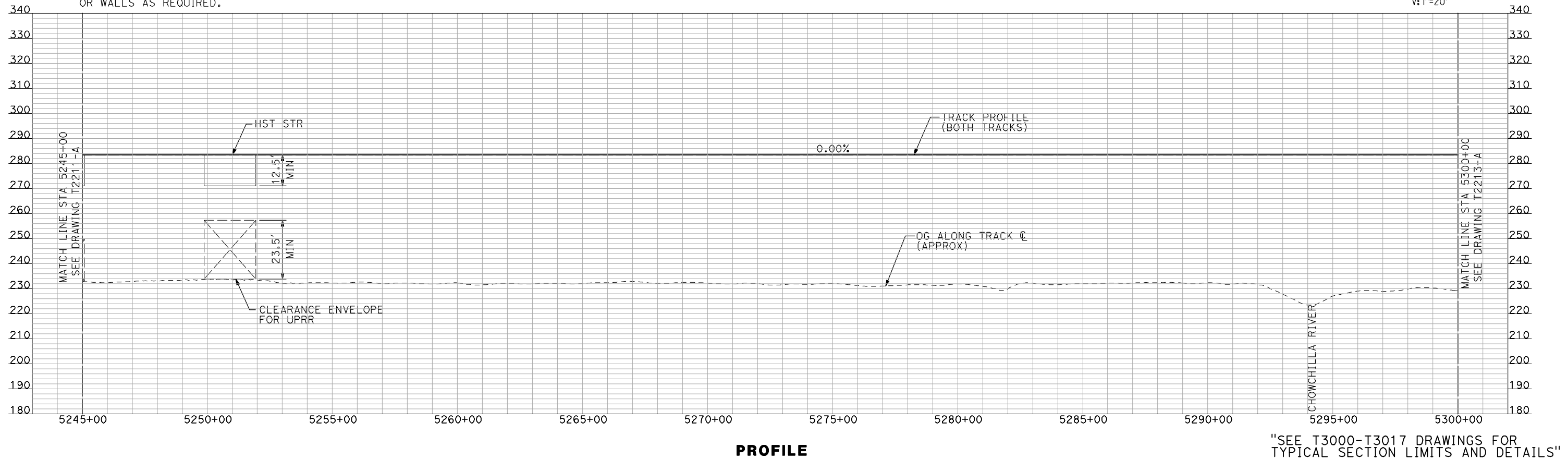
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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2211-A |
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



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| DESIGNED BY A. SHIELDS |
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RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

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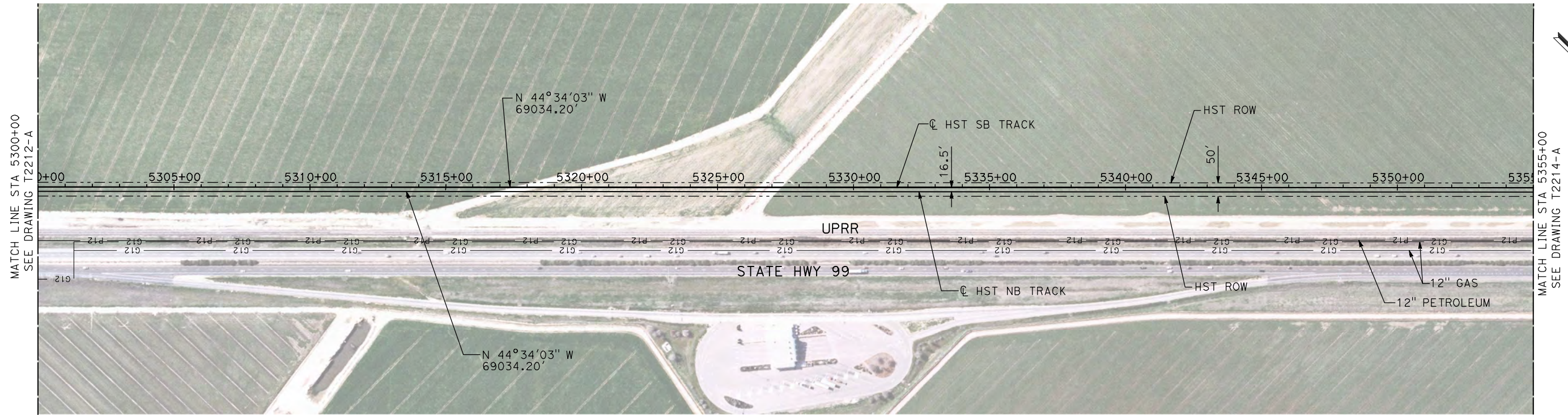
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5245+00 TO STA 5300+00

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| DRAWING NO. T2212-A |
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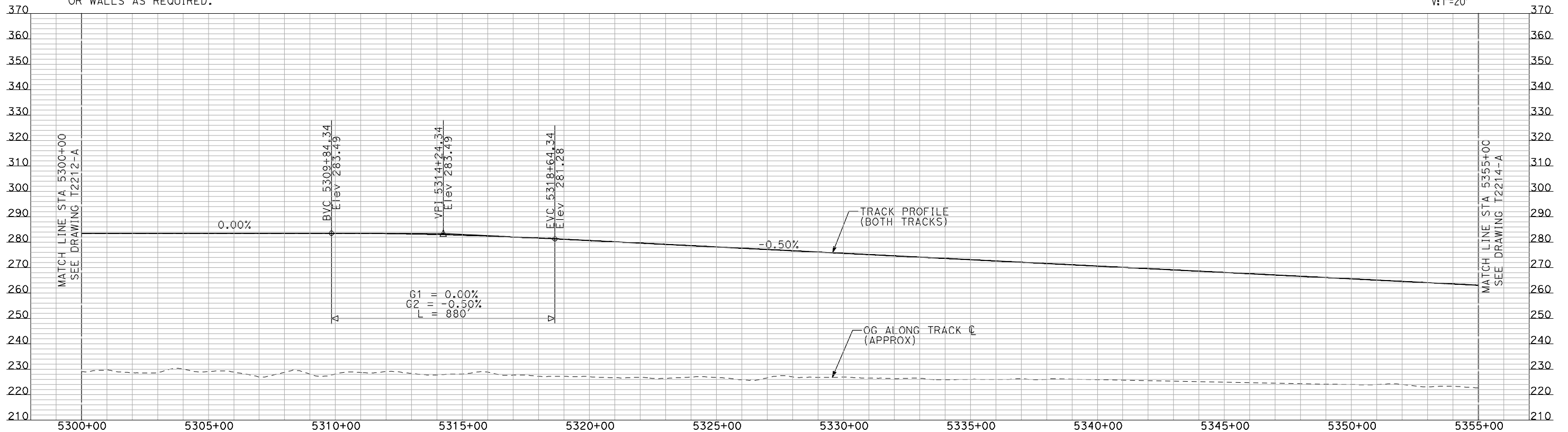
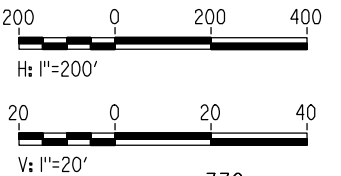
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
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| IN CHARGE A. BOONE |
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RECORD SET
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SUBMITTAL

NOT FOR
CONSTRUCTION



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

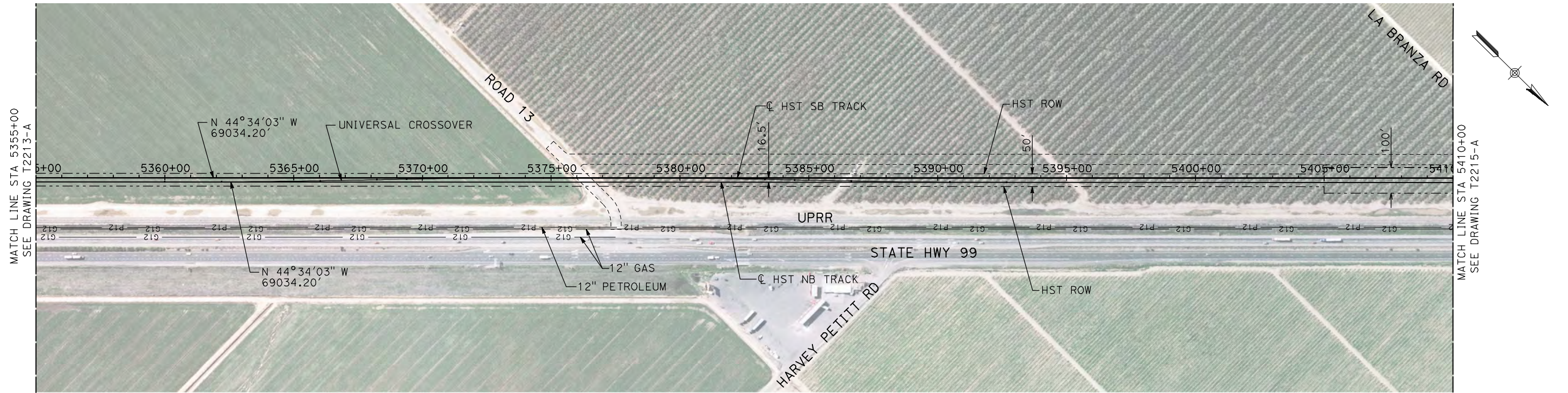
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MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5300+00 TO STA 5355+00

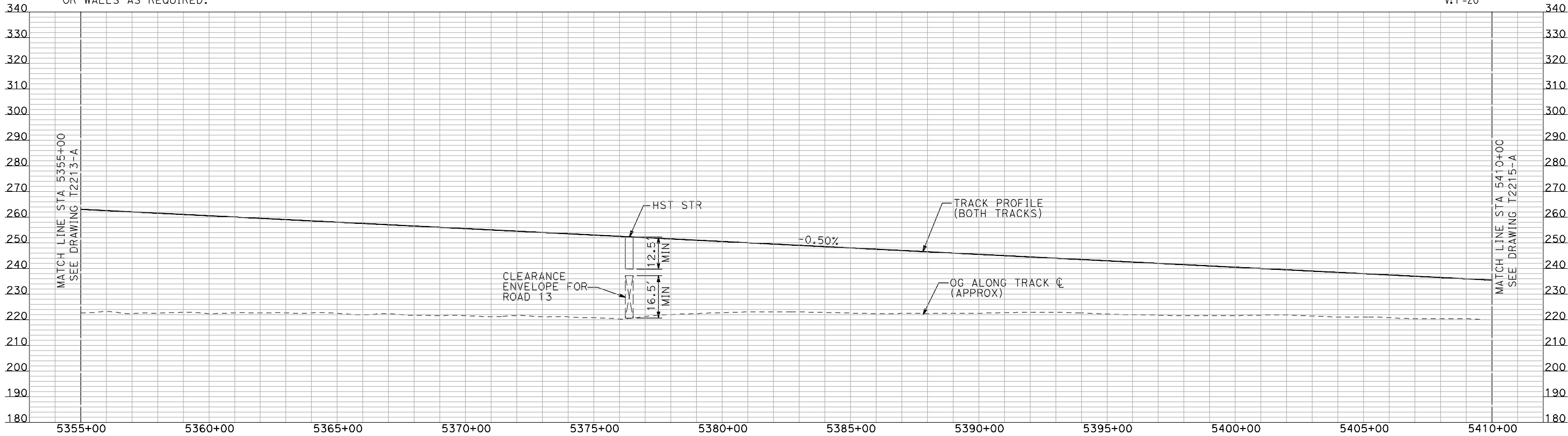
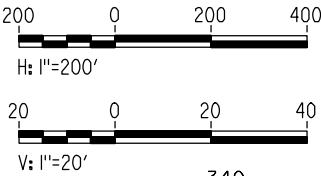
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NOTES:

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"SEE T3000-T3017 DRAWINGS FOR
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| DESIGNED BY A. SHIELDS |
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**RECORD SET
15% DESIGN
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CONSTRUCTION**

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Sacramento, CA 95811

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

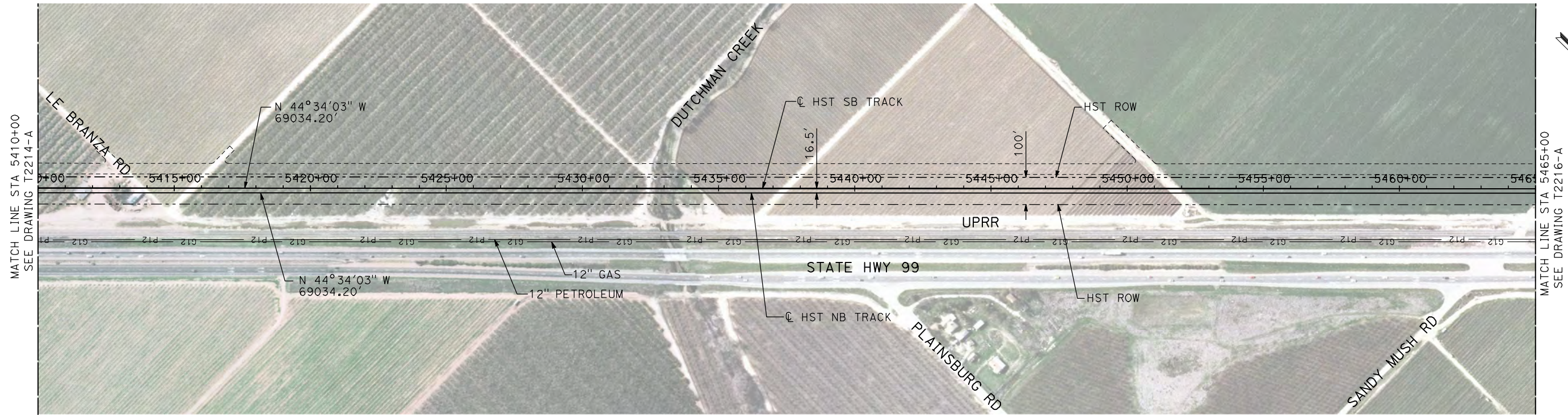
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5355+00 TO STA 5410+00

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| DRAWING NO. T2214-A |
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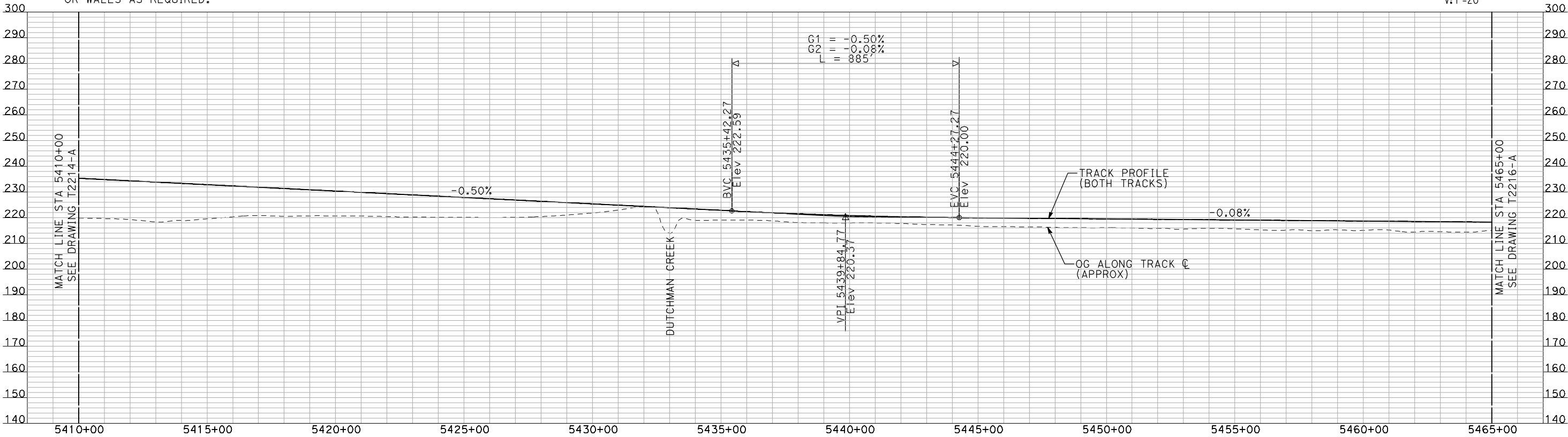
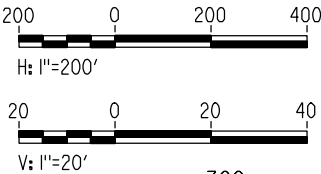
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

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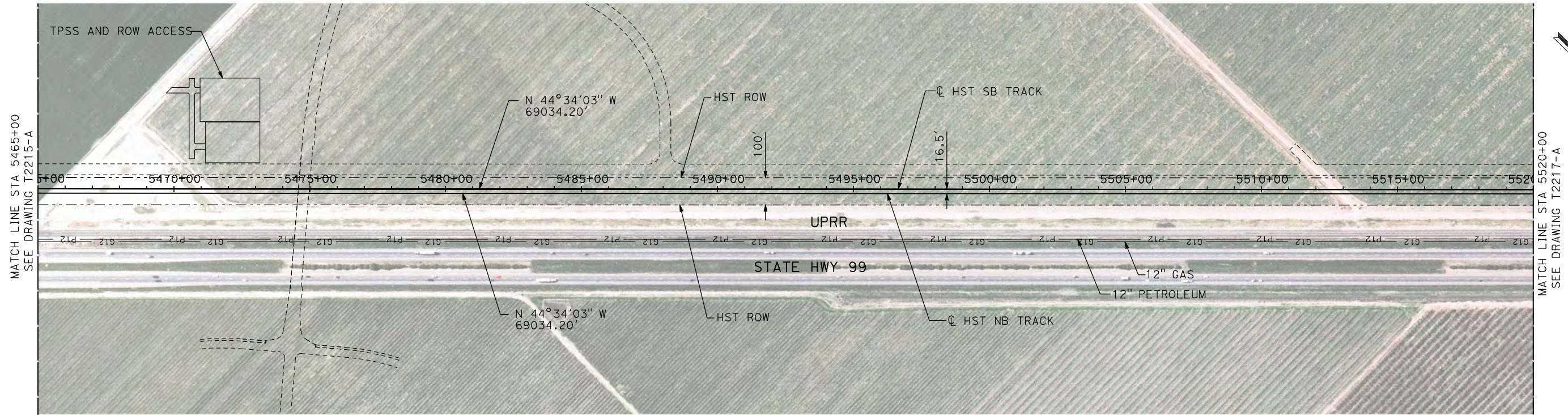


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5410+00 TO STA 5465+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2215-A
SCALE
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SHEET NO.
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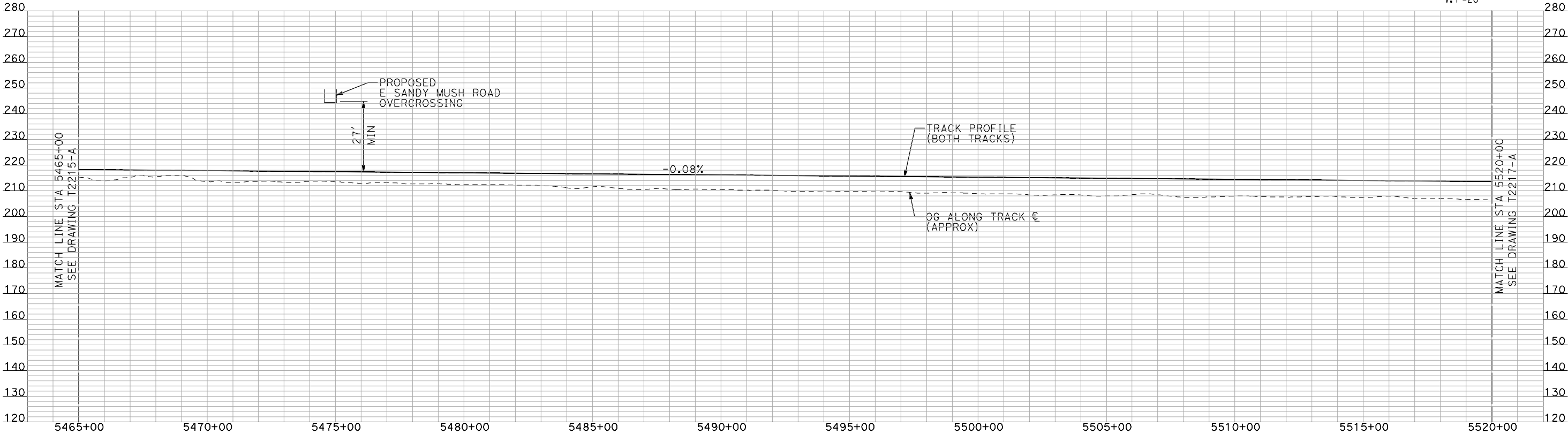
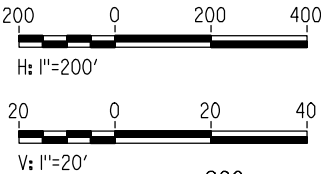
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
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Sacramento, CA 95811
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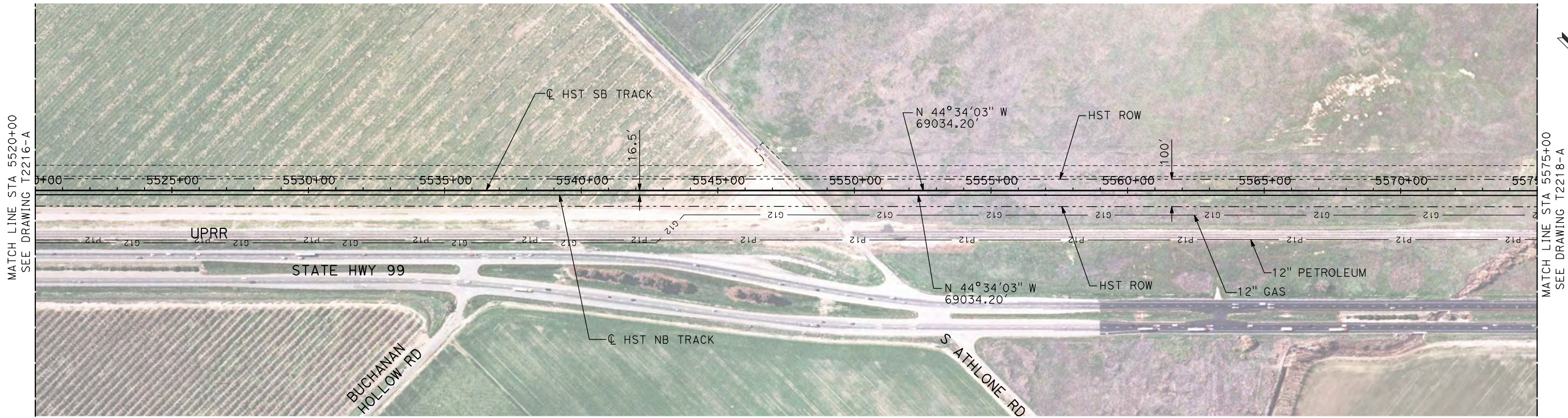


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5465+00 TO STA 5520+00

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| DRAWING NO. T2216-A |
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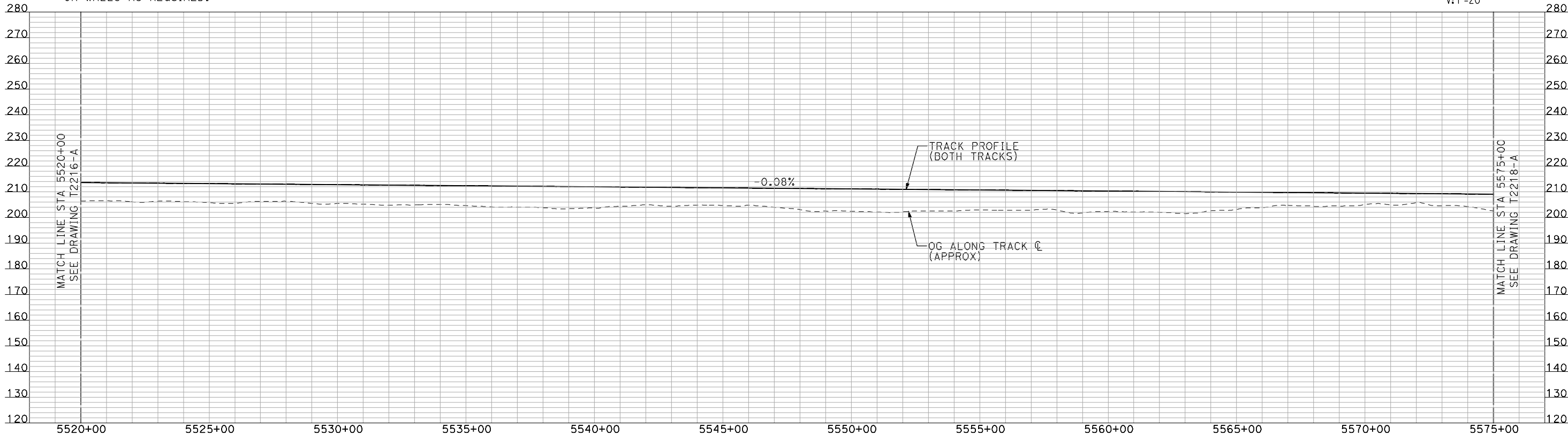
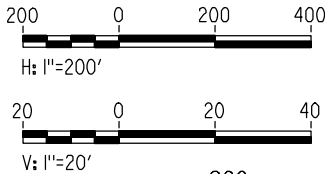
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

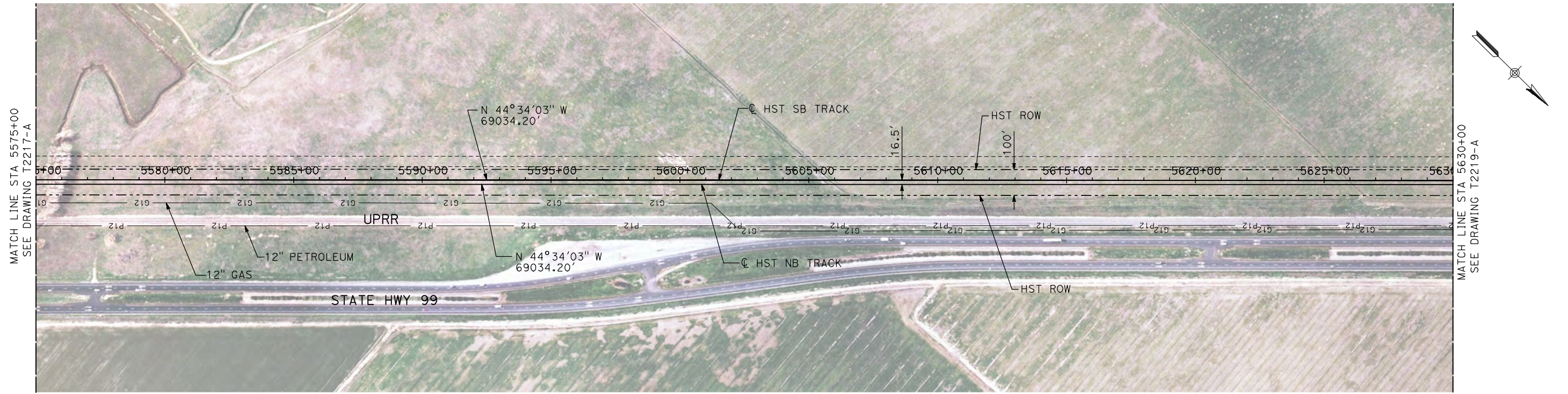
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5520+00 TO STA 5575+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2217-A
SCALE
AS SHOWN
SHEET NO.
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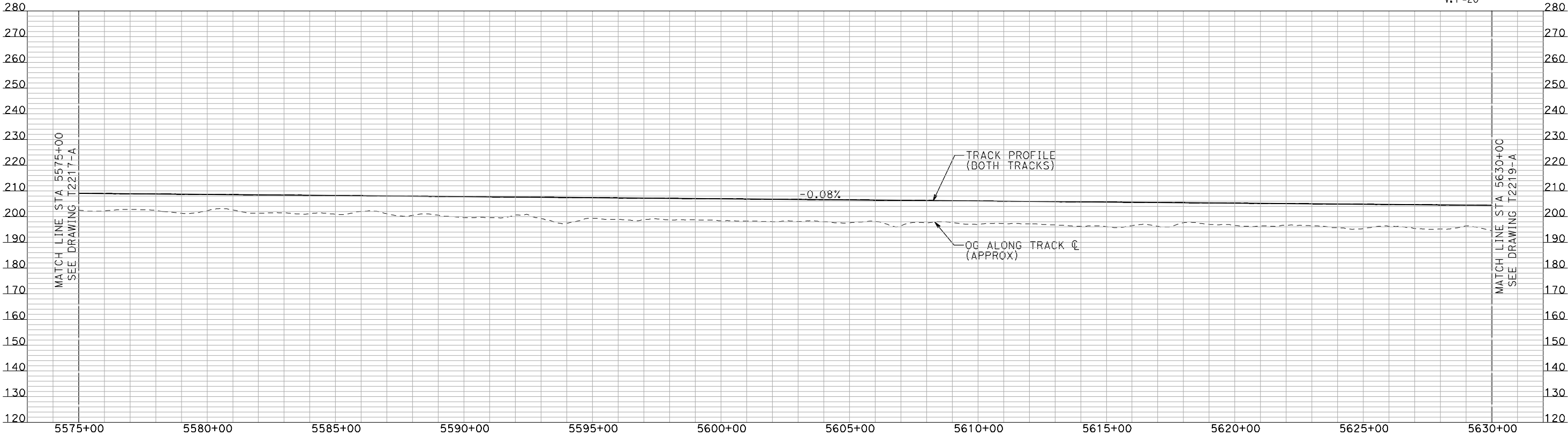
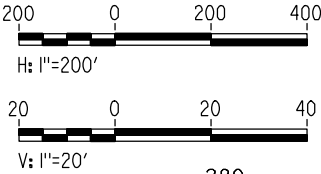
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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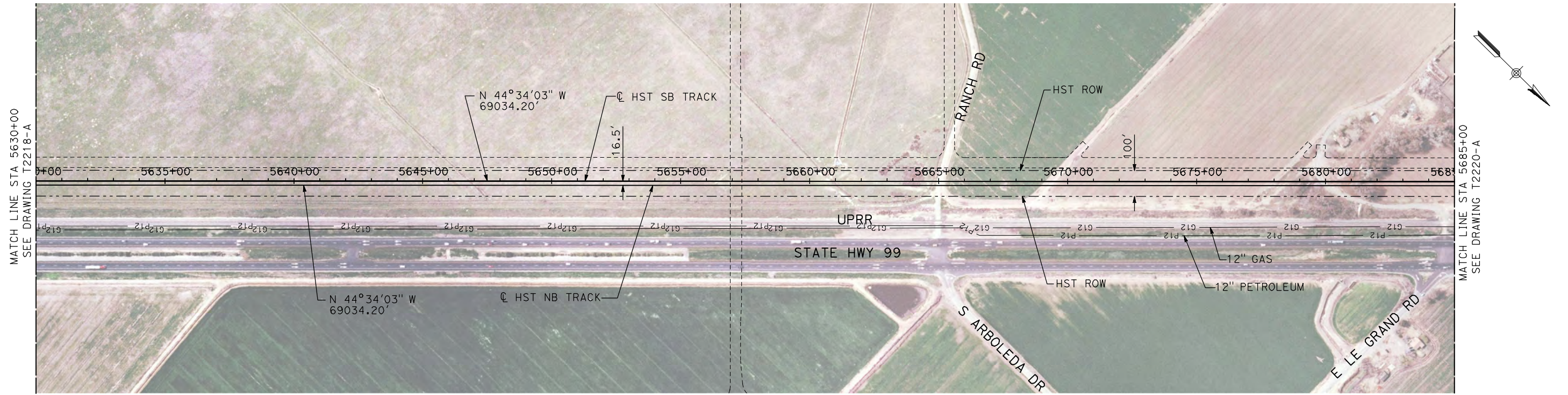
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5575+00 TO STA 5630+00

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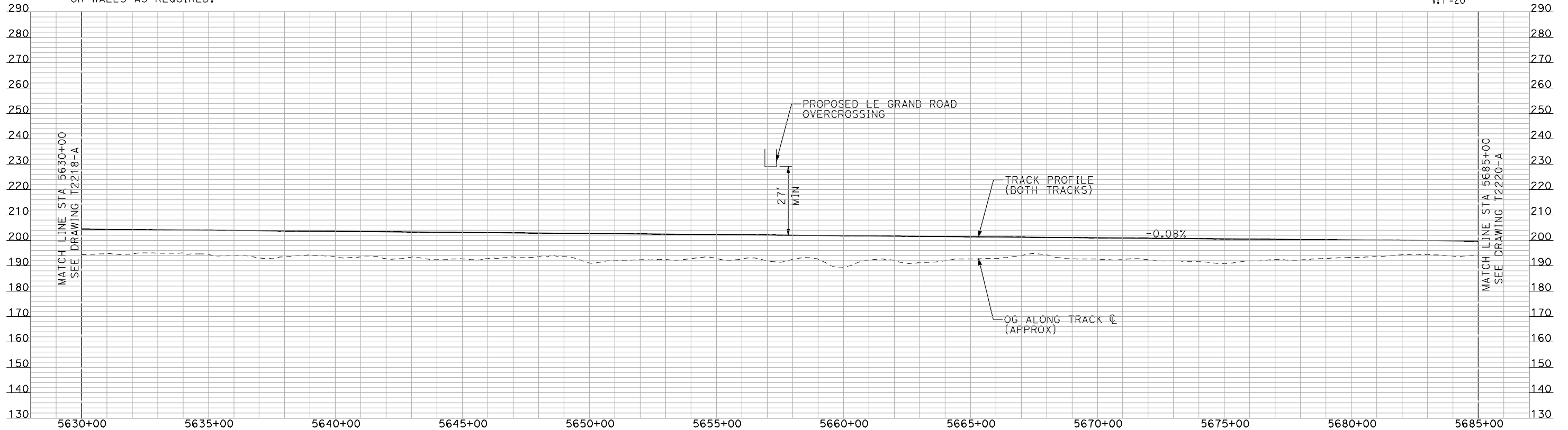
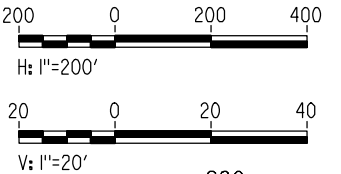
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

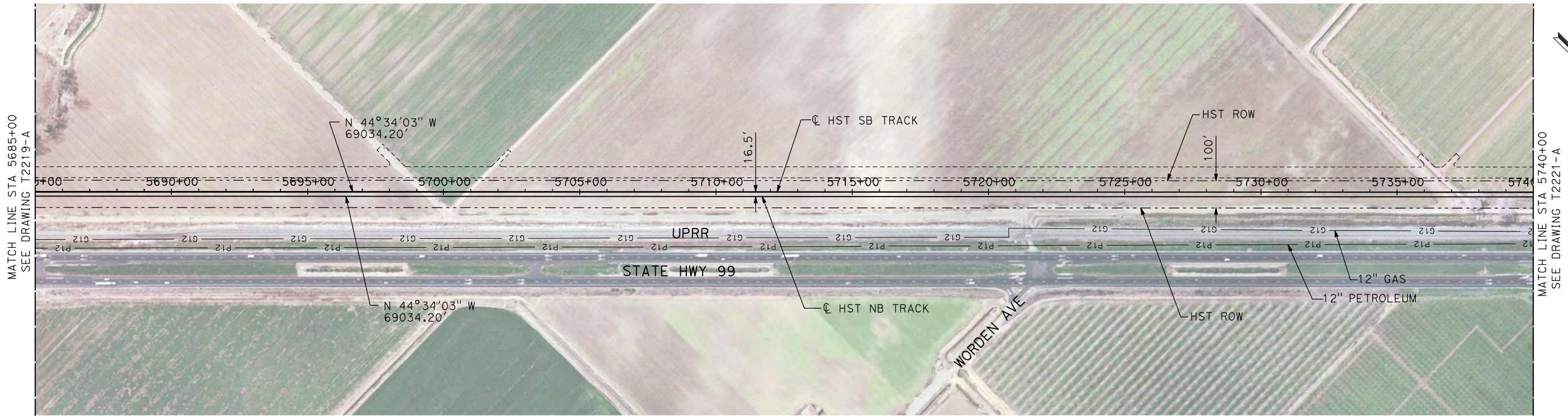
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5630+00 TO STA 5685+00

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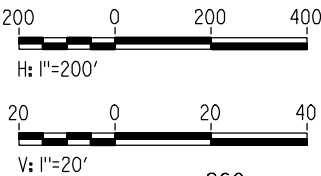
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PLAN



PROFILE

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

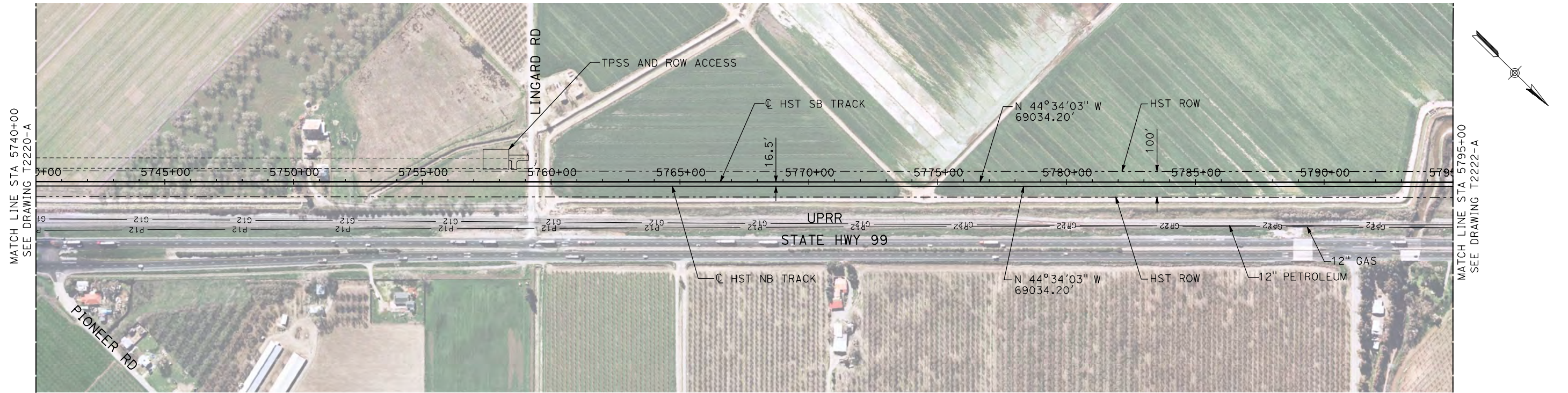
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5685+00 TO STA 5740+00

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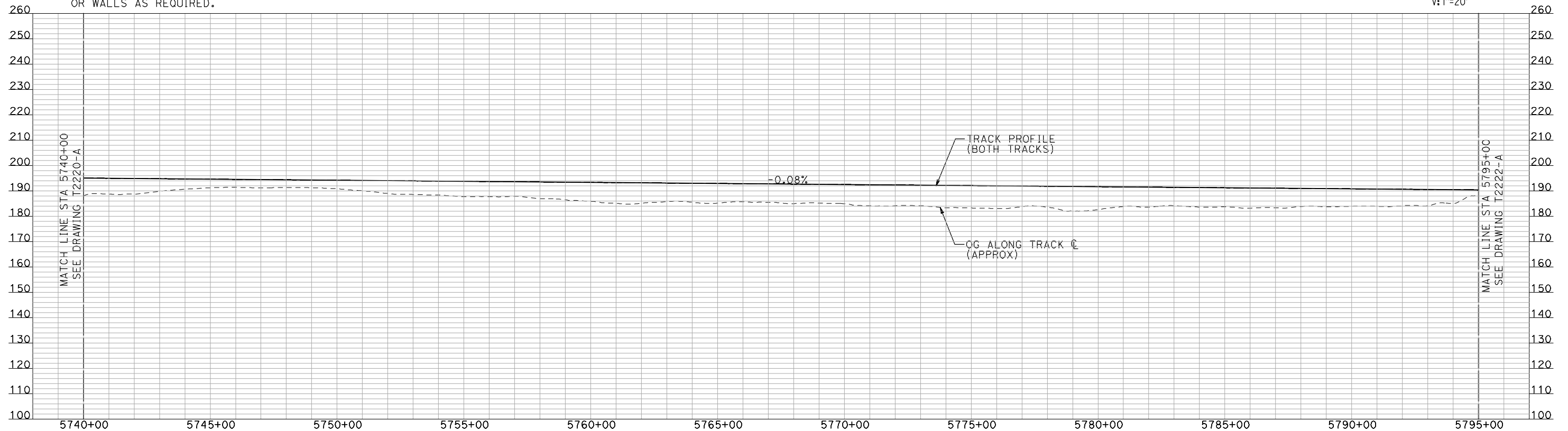
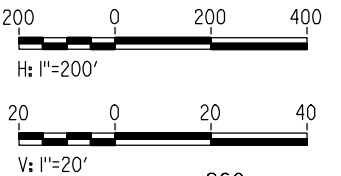
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PLAN



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DESIGNED BY
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DRAWN BY
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RECORD SET
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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

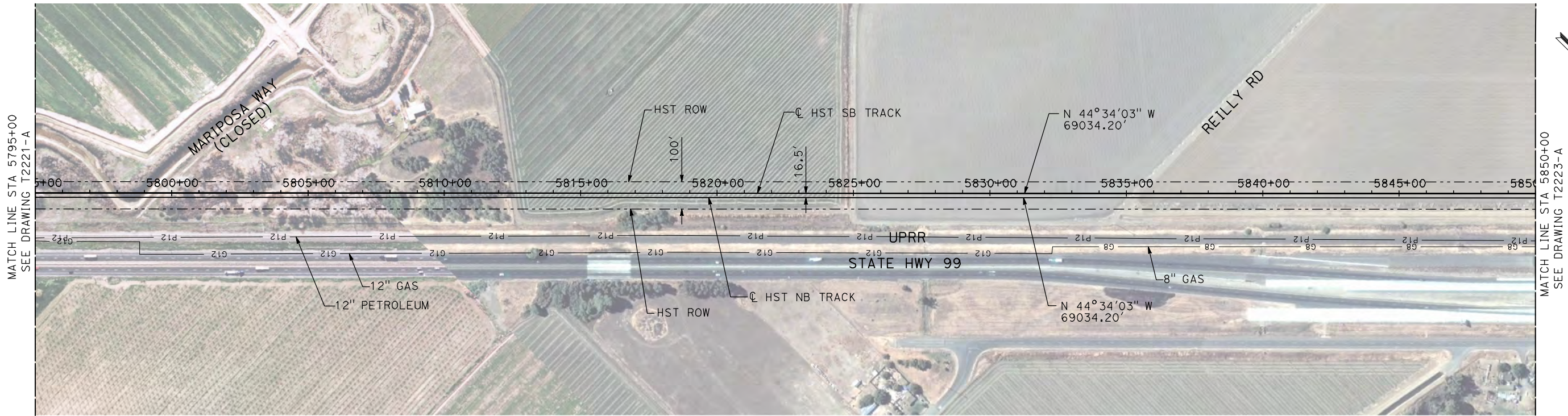
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5740+00 TO STA 5795+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2221-A
SCALE
AS SHOWN
SHEET NO.
OF

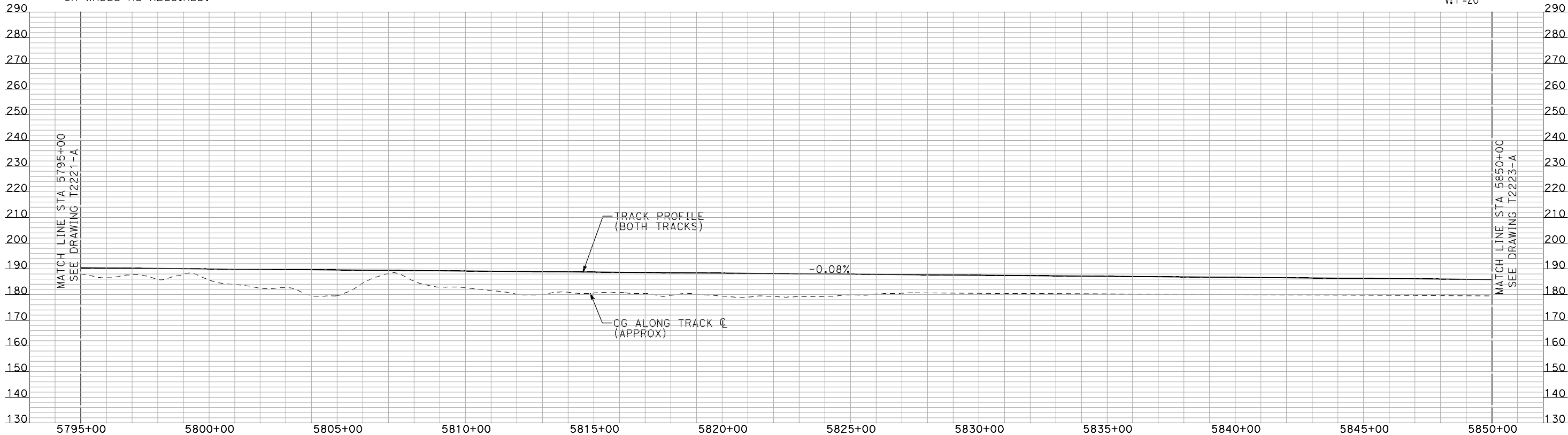
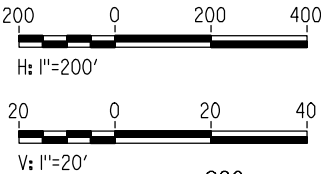
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DESIGNED BY
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Sacramento, CA 95811
CH2M HILL



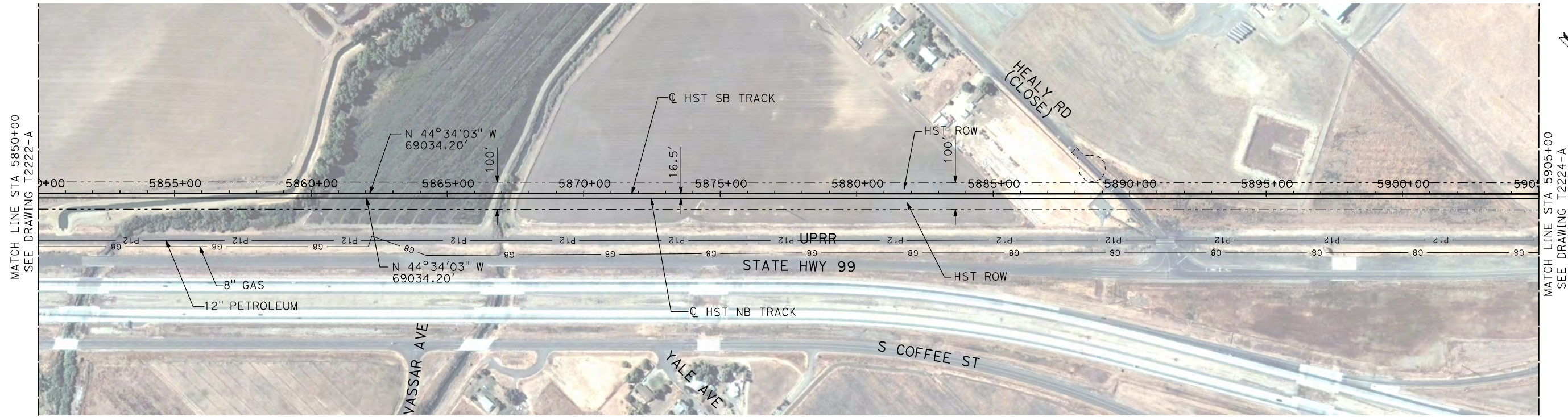
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5795+00 TO STA 5850+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2222-A
SCALE
AS SHOWN
SHEET NO.
OF

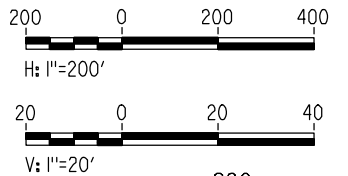
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

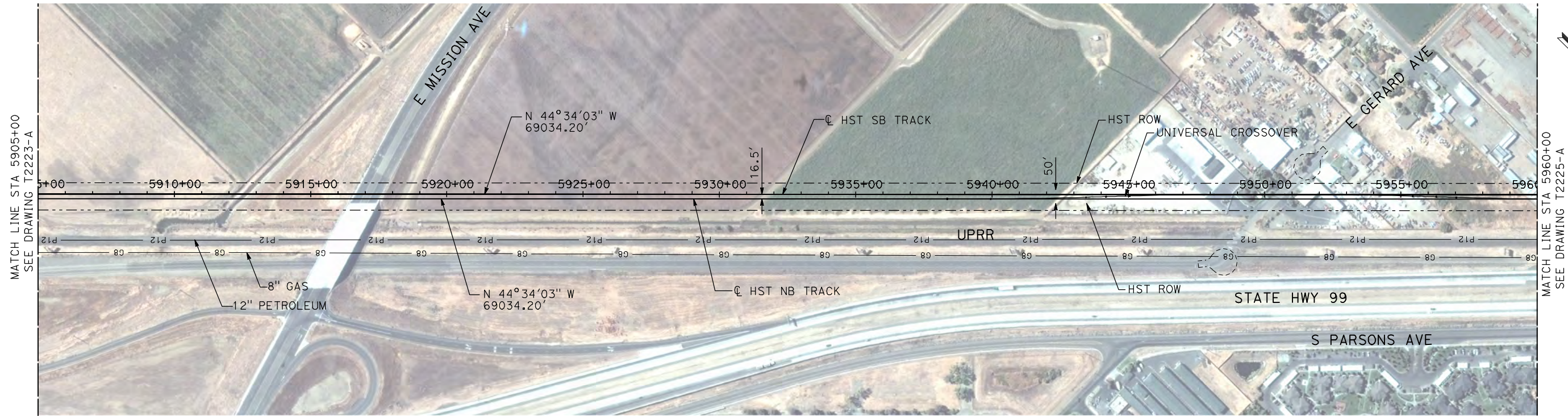
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 5850+00 TO STA 5905+00

CONTRACT NO.
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T2223-A
SCALE
AS SHOWN
SHEET NO.
OF

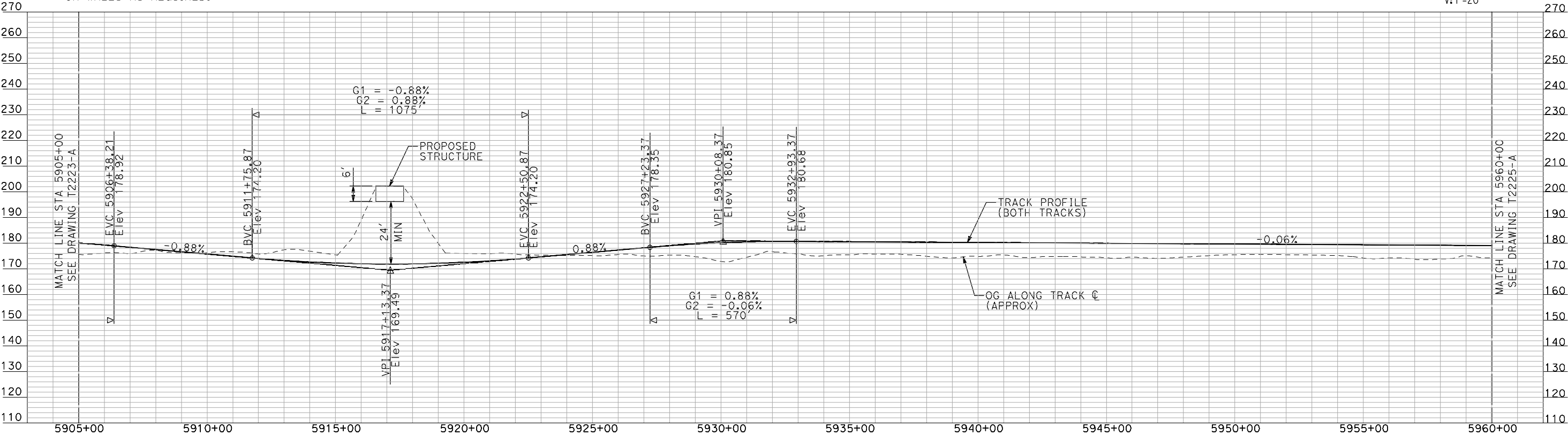
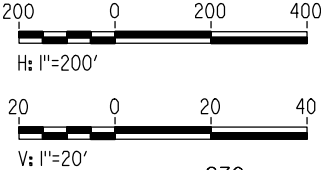
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

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CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

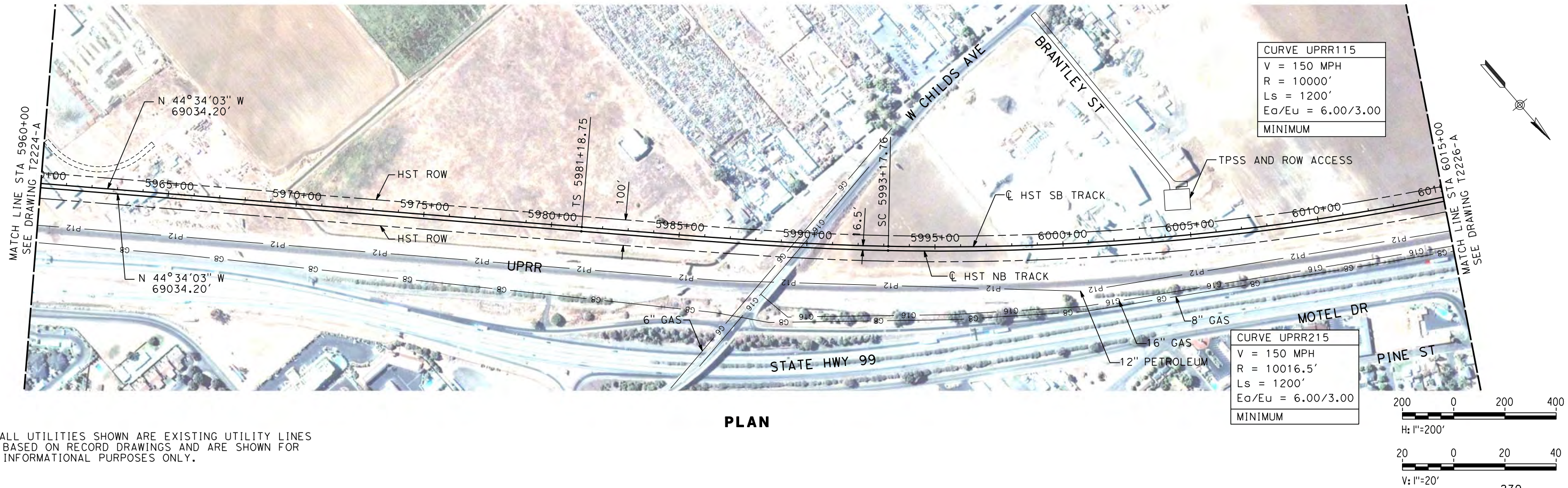
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MERCED TO FRESNO

UPRR/SR 99 MERCED CONNECTION

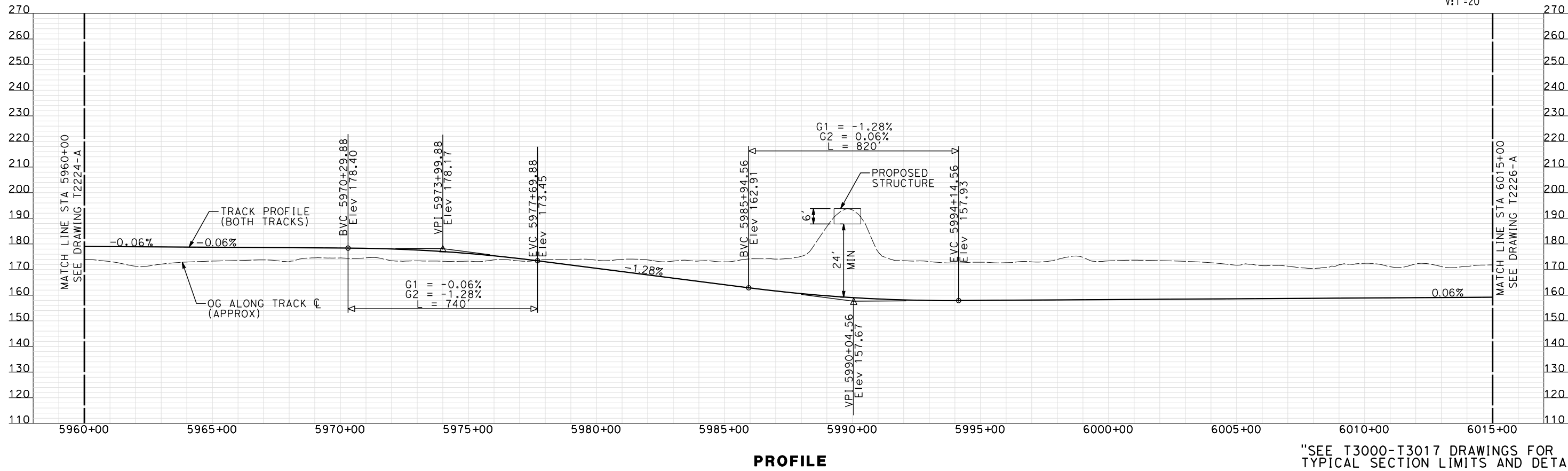
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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2224-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

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NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.



"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| 1 | 12/12/2011 | AS | | | TRACK REALIGNMENT |

DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/27/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2MHILL



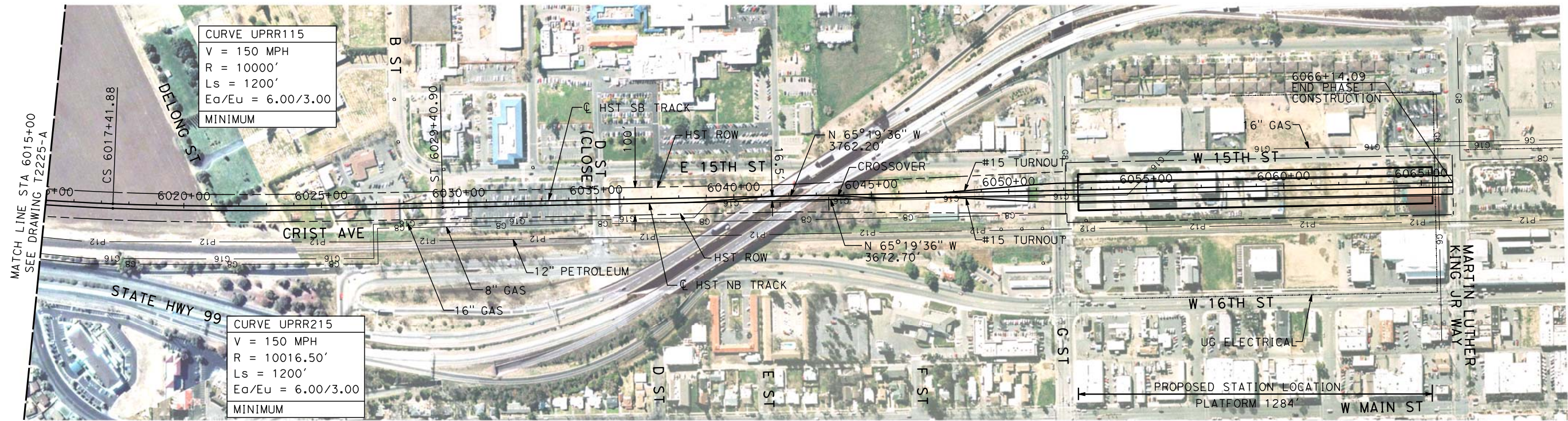
CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
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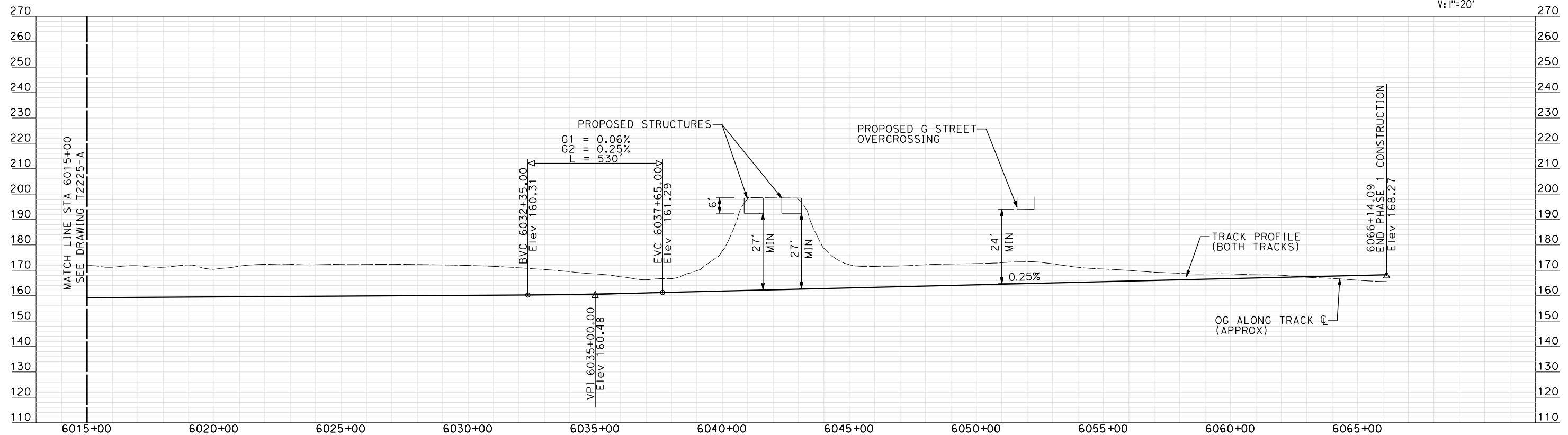
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OF

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shieldsa



NOTE:
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR
INFORMATIONAL PURPOSES ONLY.



"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
|-----|------------|----|-----|-----|-------------------|
| 1 | 12/12/2011 | AS | | | TRACK REALIGNMENT |

DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/27/2011

**RECORD SET
15% DESIGN
SUBMITTAL**

**NOT FOR
CONSTRUCTION**

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Sacramento, CA 95811
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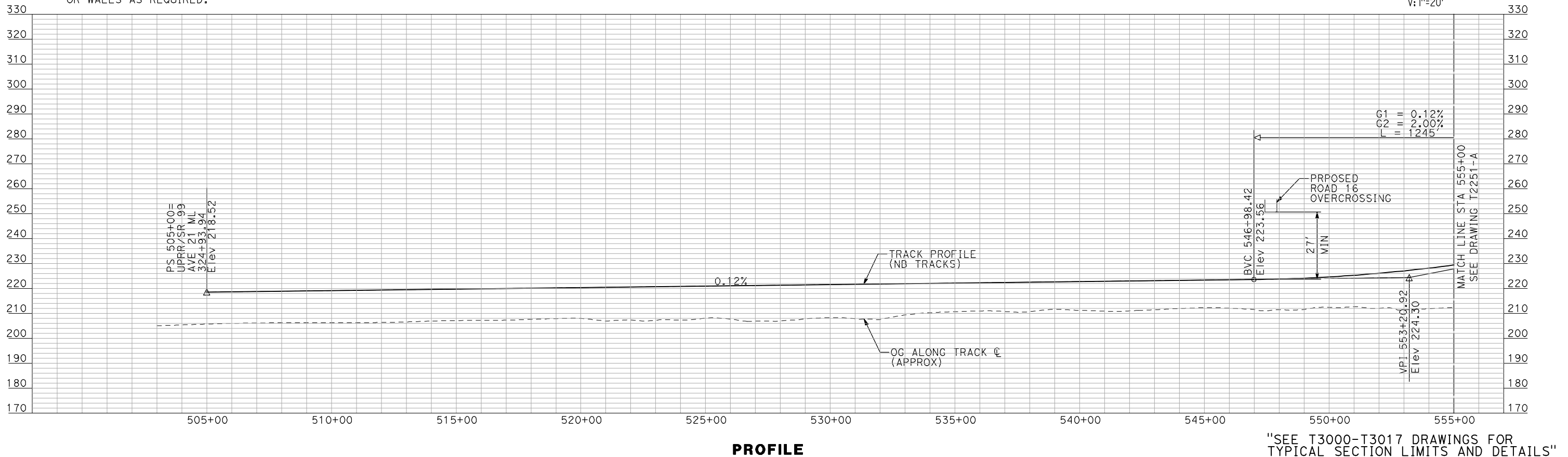
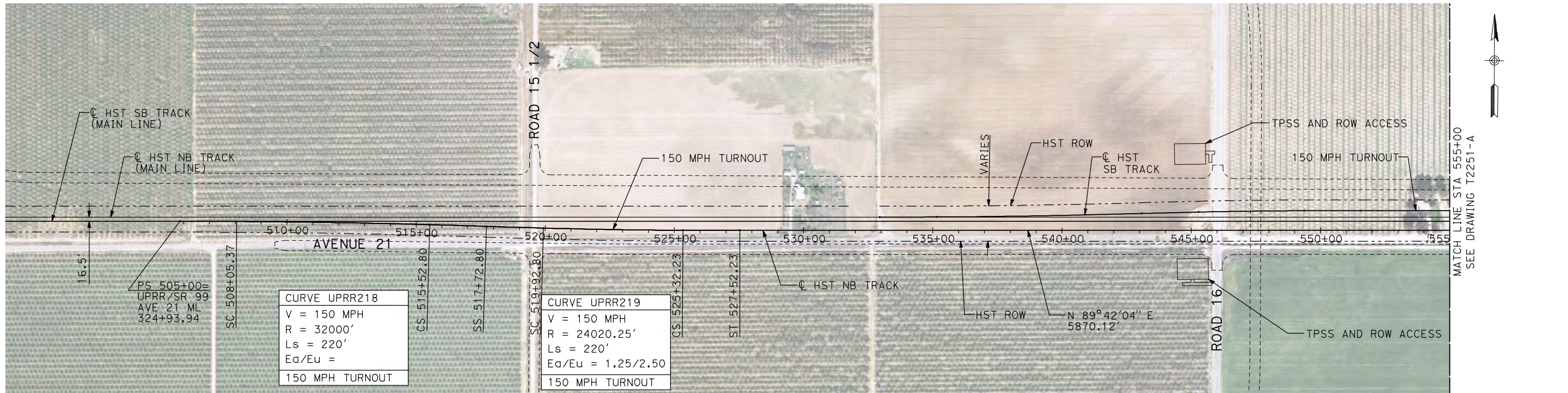
**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 MERCED CONNECTION

PLAN AND PROFILE
STA 6015+00 TO STA 6066+14.09

CONTRACT NO.
HSR06-007
DRAWING NO.
T2226-A
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

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Technical Services, Inc.
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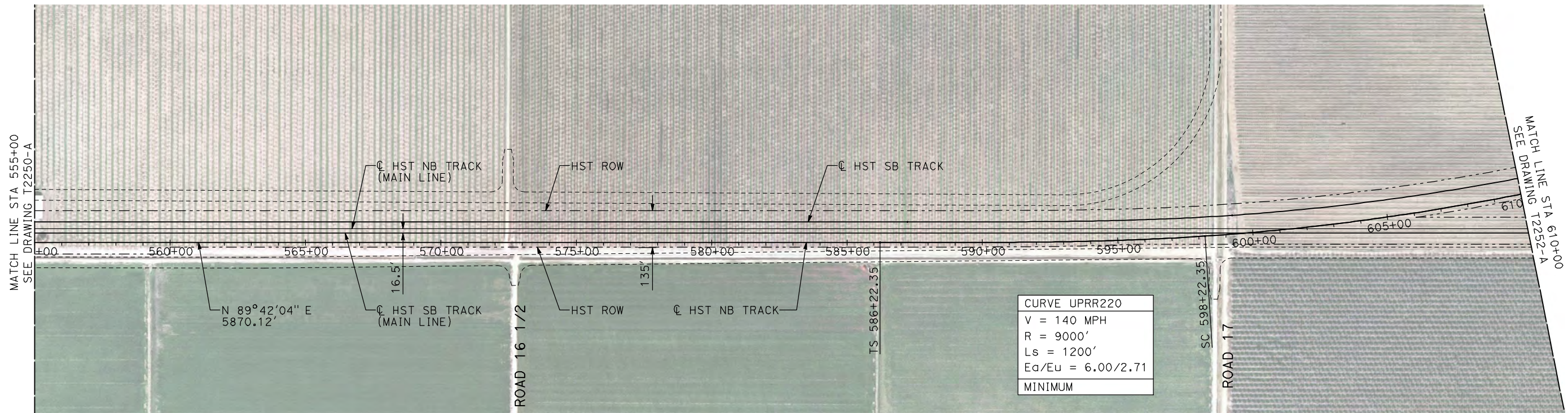


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 WYE - NB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 505+00 TO STA 555+00

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| CONTRACT NO. HSR06-007 |
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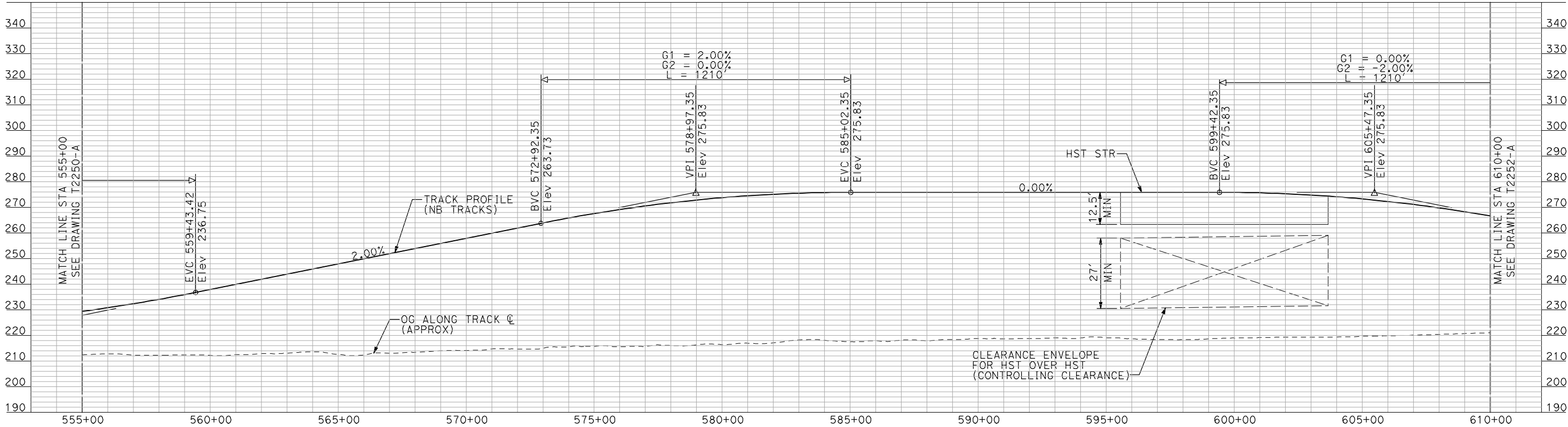
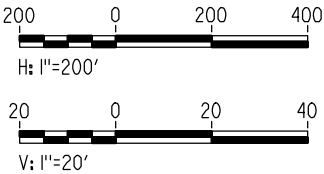
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
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CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE - NB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 555+00 TO STA 610+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2251-A |
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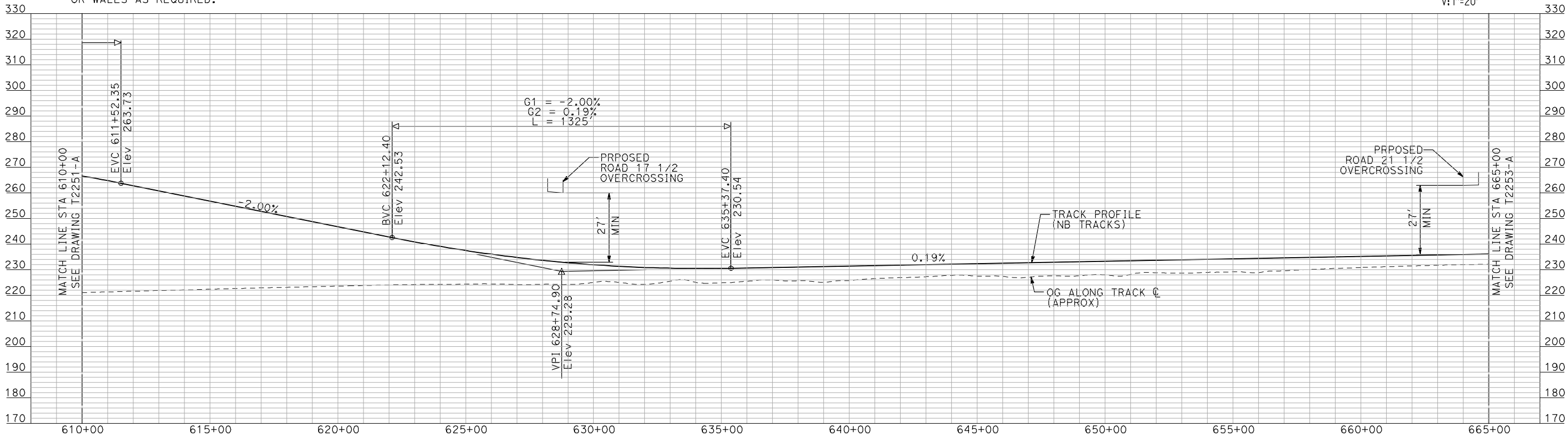
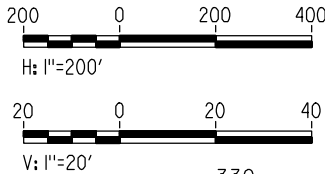
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION

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2020 L Street, Suite 300
Sacramento, CA 95811

CH2M HILL



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE - NB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 610+00 TO STA 665+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2252-A |
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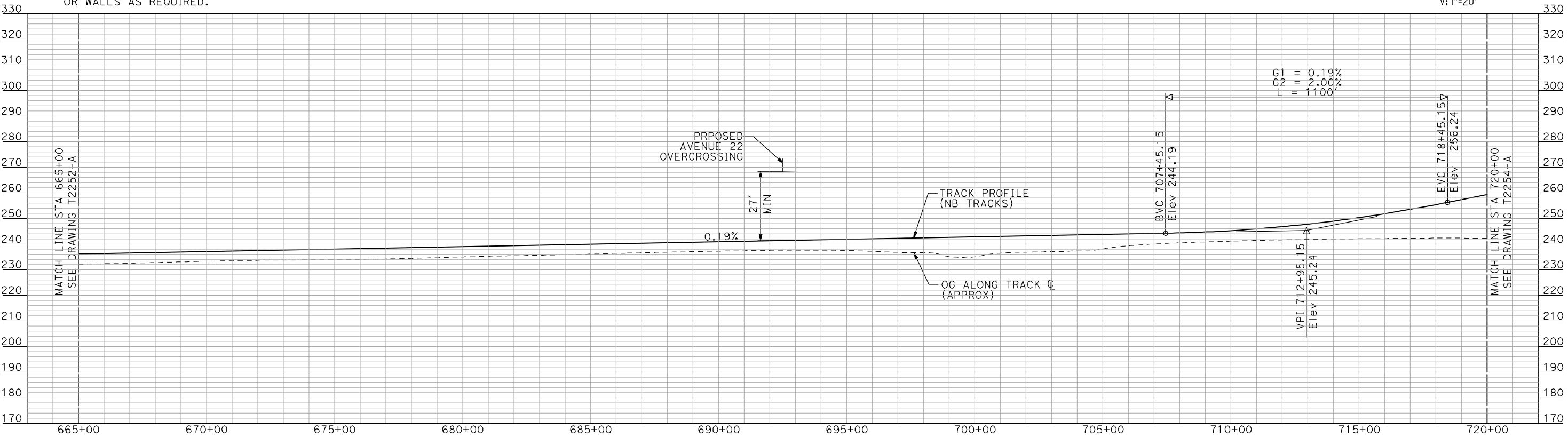
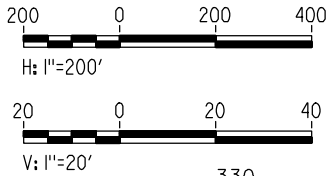
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO
UPRR/SR 99 WYE - NB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 665+00 TO STA 720+00

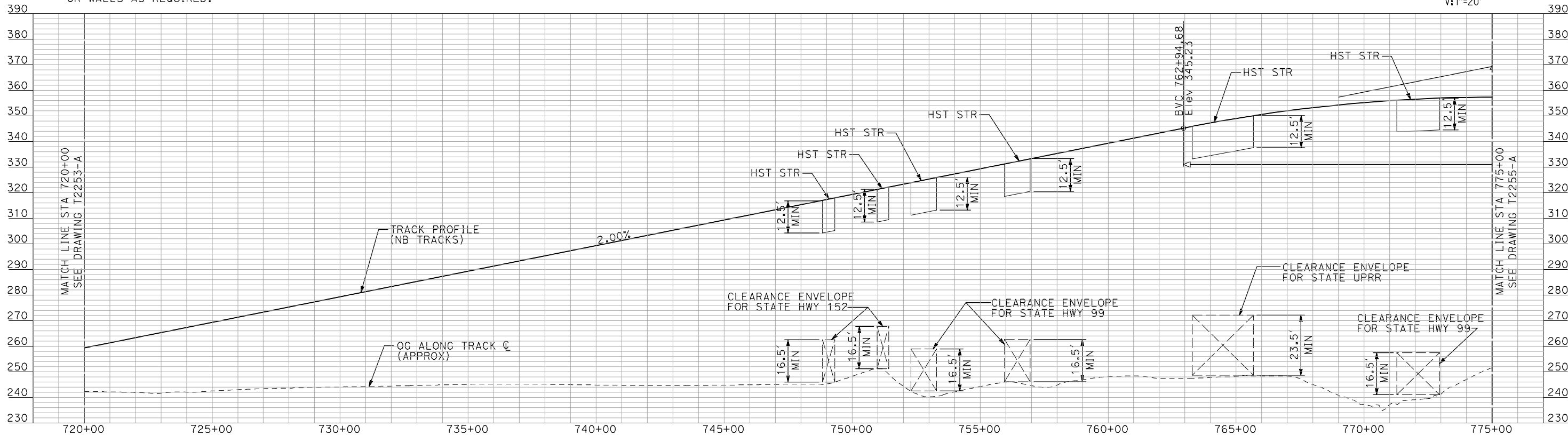
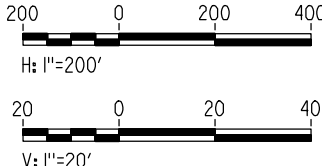
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- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
 2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
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SUBMITTAL

NOT FOR
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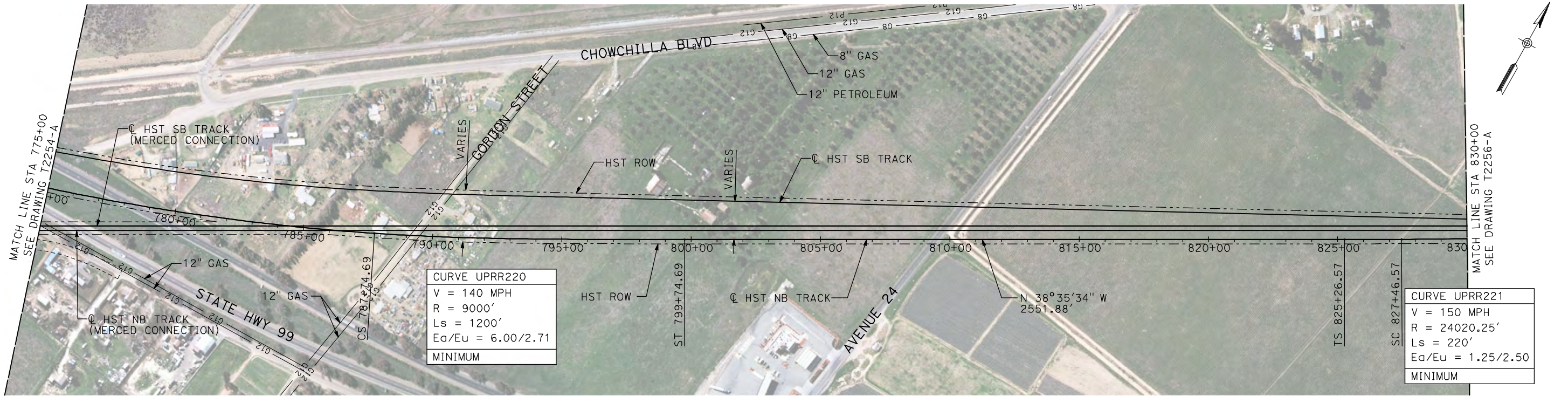
AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 WYE - NB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 720+00 TO STA 775+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2254-A
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AS SHOWN
SHEET NO.
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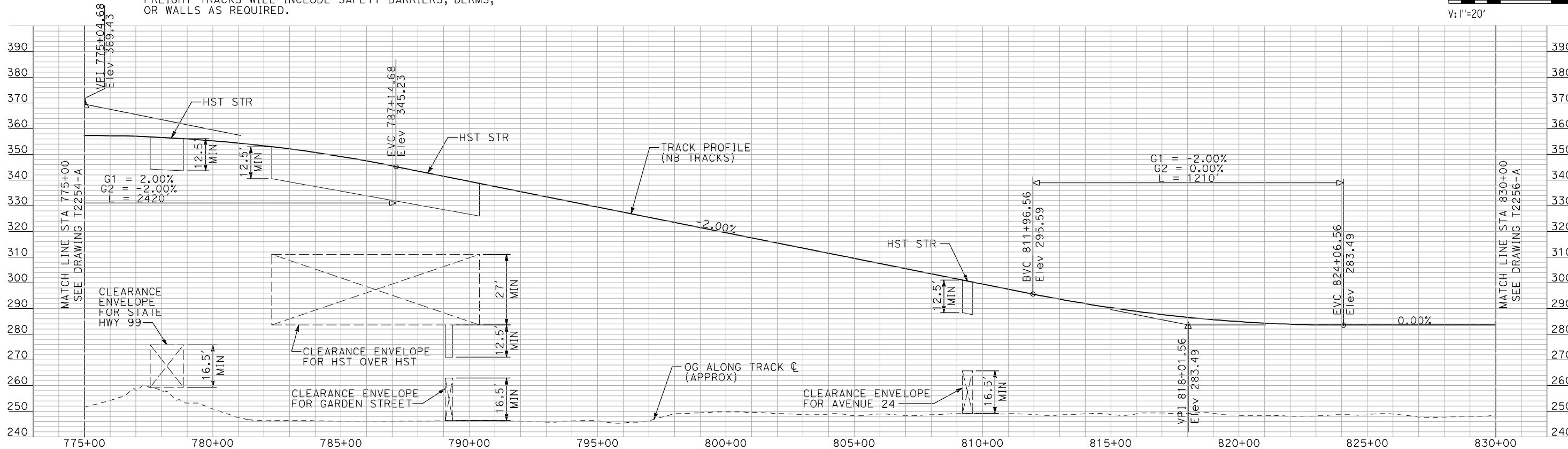
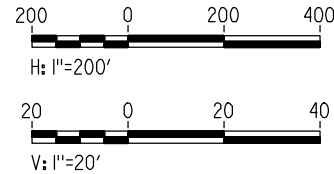
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NOTES:

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- TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
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SUBMITTAL

NOT FOR
CONSTRUCTION



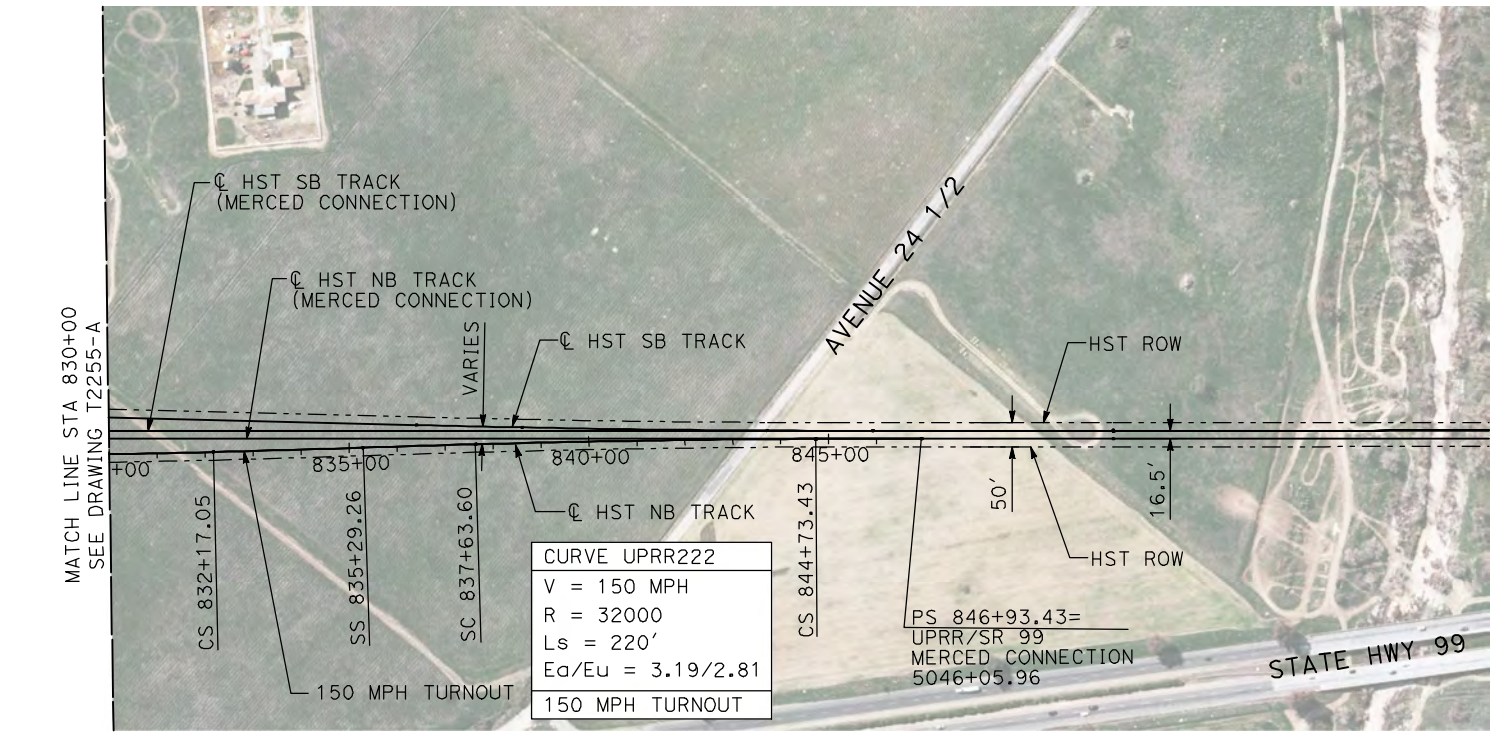
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 WYE - NB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 775+00 TO STA 830+00

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| DRAWING NO. T2255-A |
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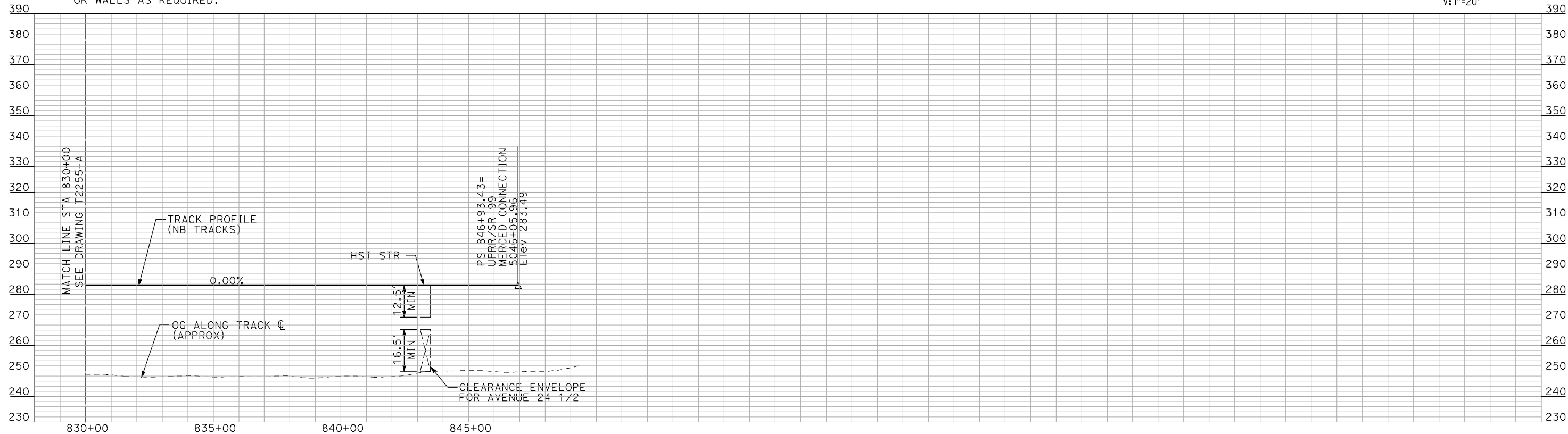
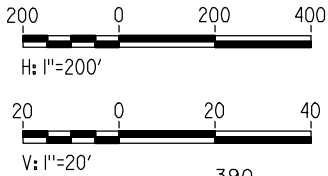
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

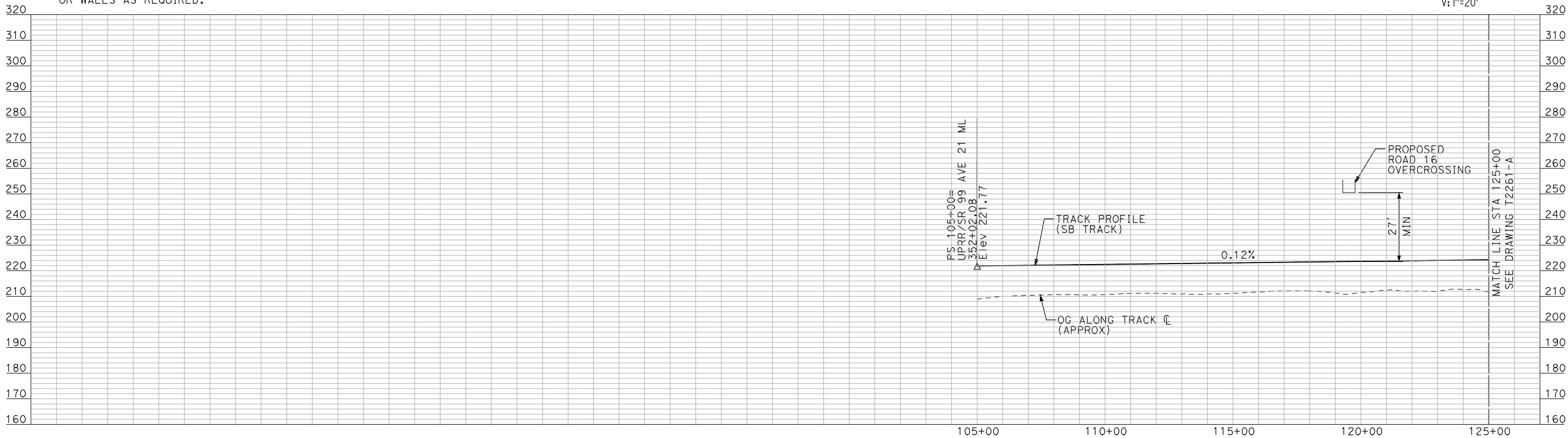
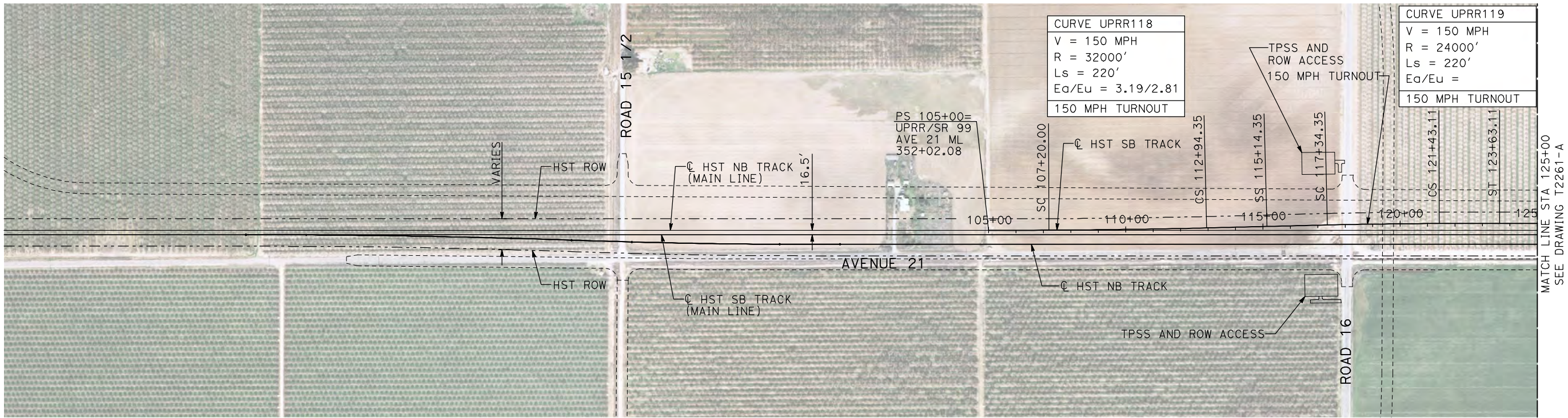


CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 WYE - NB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 830+00 TO STA 846+93.43

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2256-A |
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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
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CONSTRUCTION

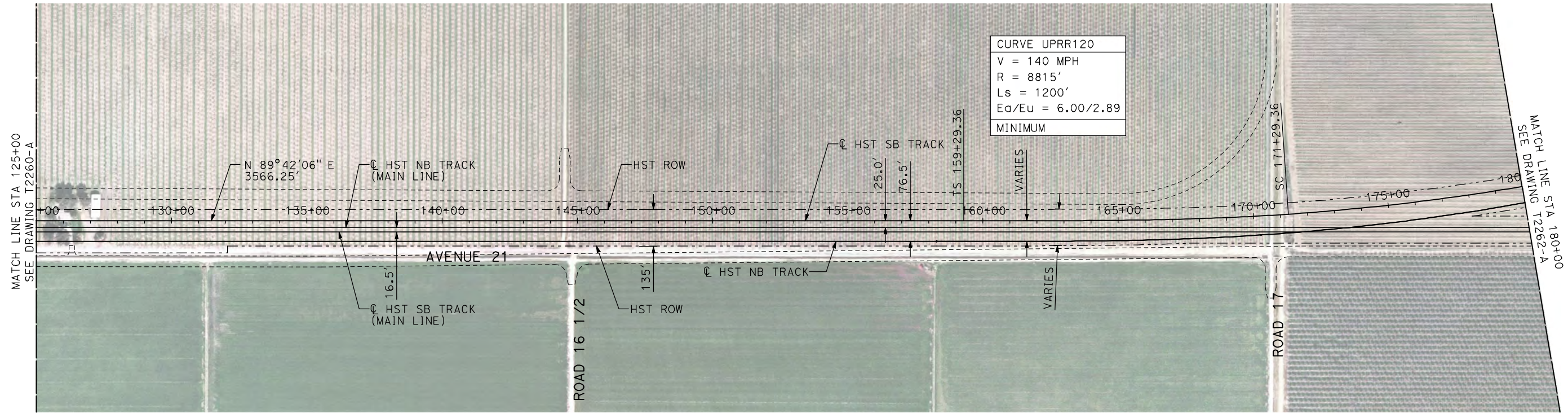
AECOM
Technical Services, Inc.
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Sacramento, CA 95811
CH2M HILL



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 WYE - SB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 105+00 TO STA 125+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2260-A
SCALE
AS SHOWN
SHEET NO.
OF

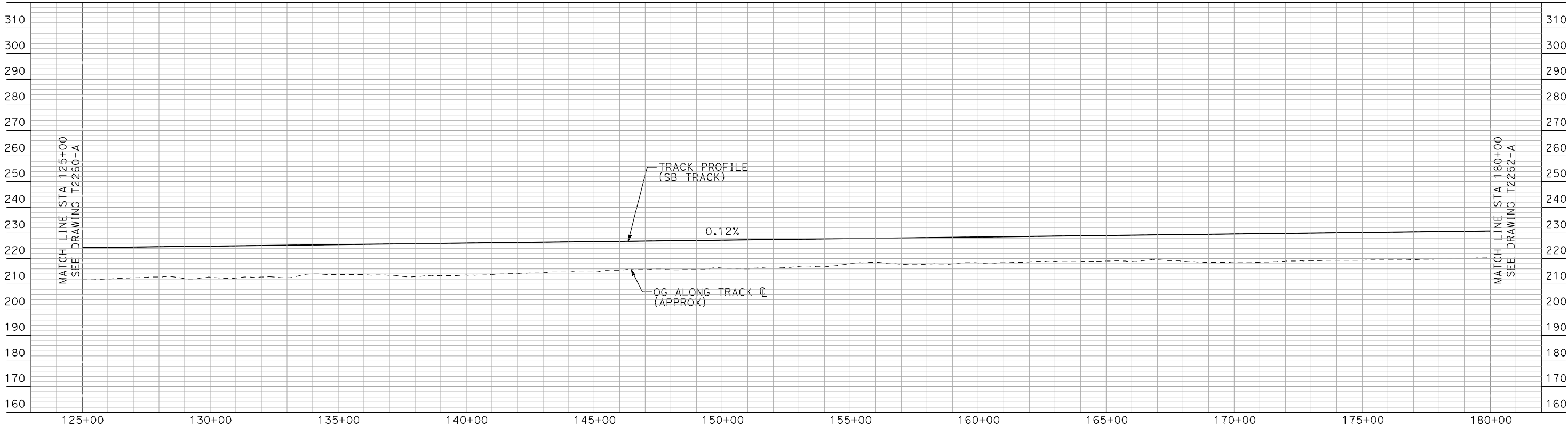
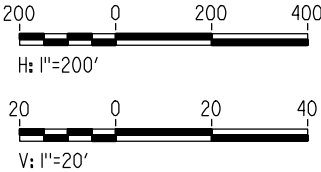
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NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

| REV | DATE | BY | CHK | APP | DESCRIPTION |
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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 WYE - SB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 125+00 TO STA 180+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2261-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

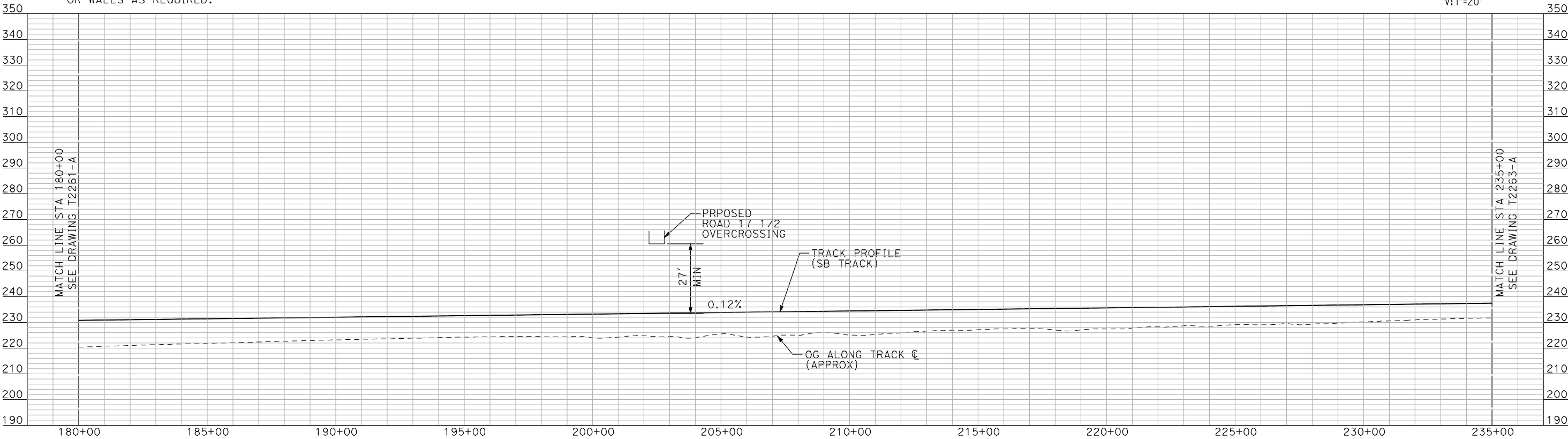
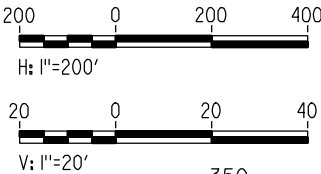
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION



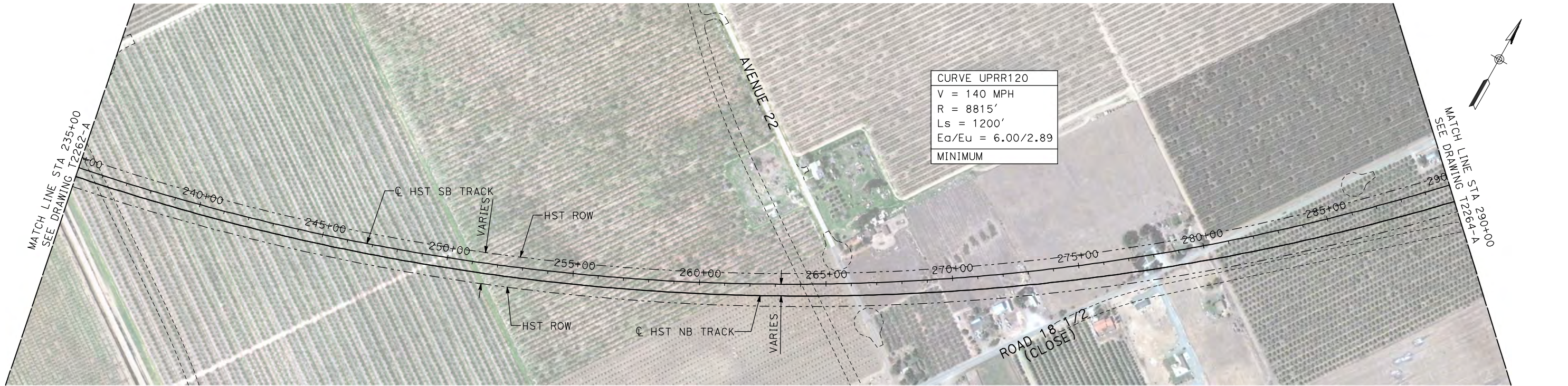
CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 WYE - SB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 180+00 TO STA 235+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2262-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

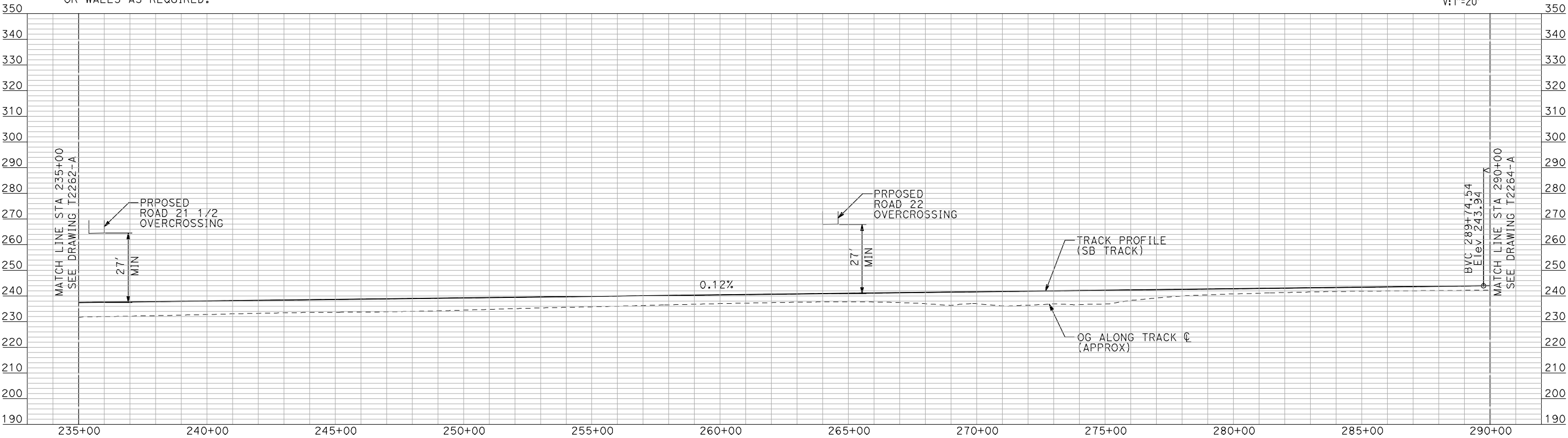
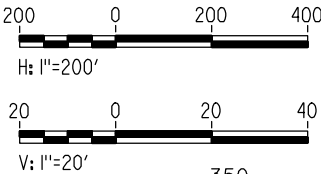
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
| CHECKED BY A. BOONE |
| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811

CH2M HILL



CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 WYE - SB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 235+00 TO STA 290+00

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2263-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |

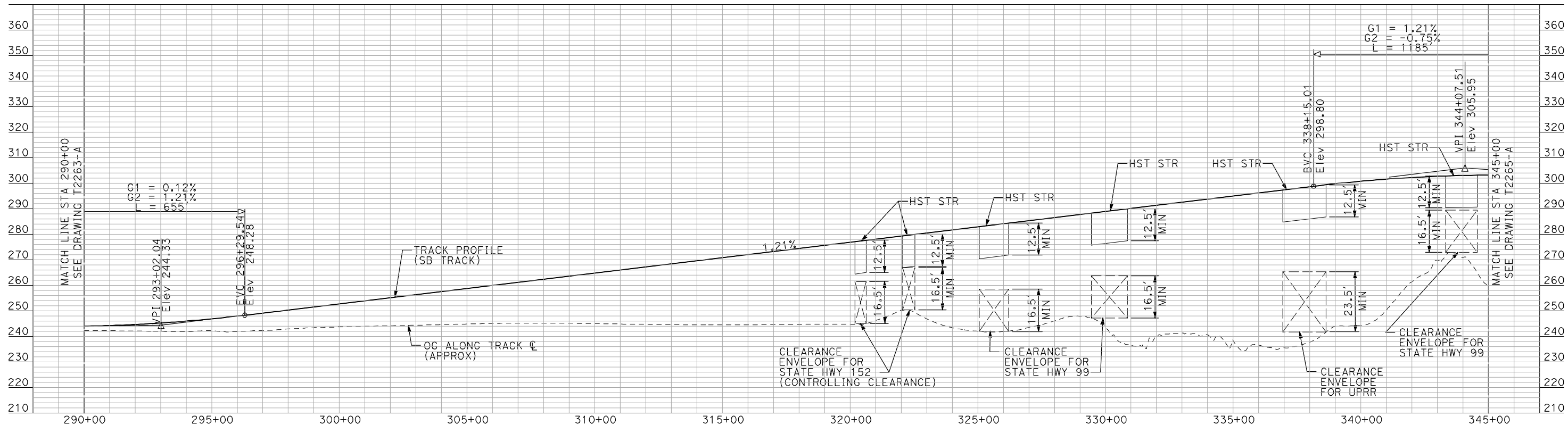
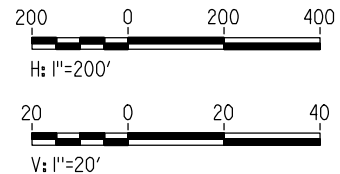
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NOTES:

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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL

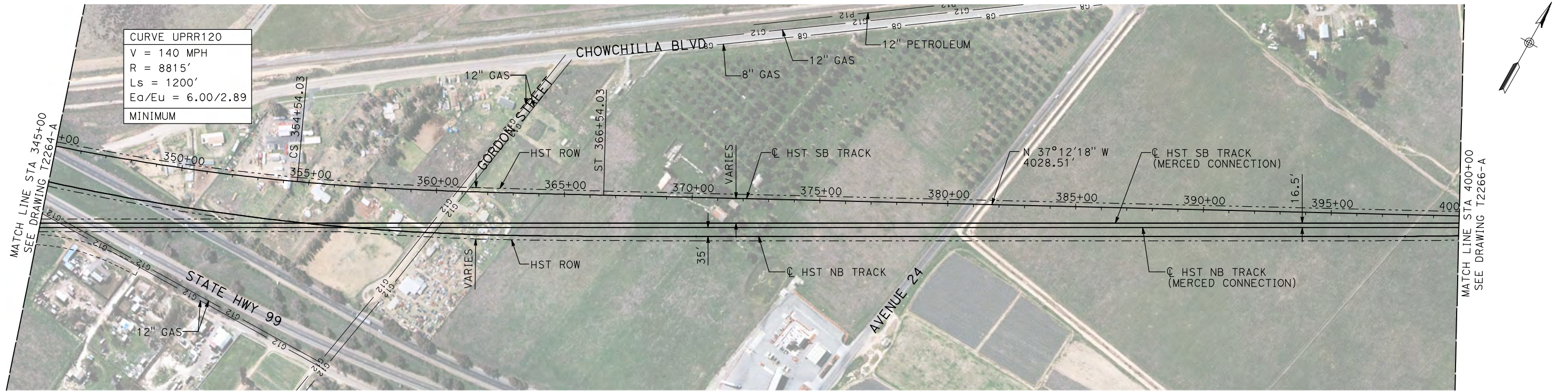


**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**

UPRR/SR 99 WYE - SB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 290+00 TO STA 345+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2264-A
SCALE
AS SHOWN
SHEET NO.
OF

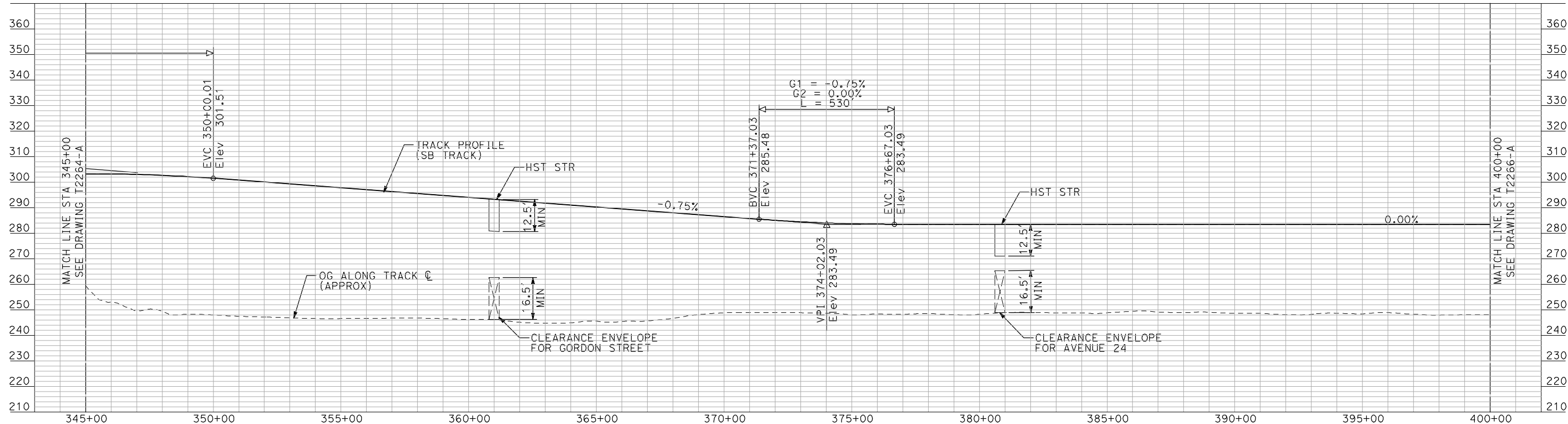
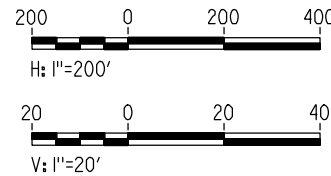
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PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR
TYPICAL SECTION LIMITS AND DETAILS"

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DESIGNED BY
A. SHIELDS
DRAWN BY
H. SULLIVAN
CHECKED BY
A. BOONE
IN CHARGE
A. BOONE
DATE
07/20/2011

RECORD SET
15% DESIGN
SUBMITTAL

NOT FOR
CONSTRUCTION

AECOM
Technical Services, Inc.
2020 L Street, Suite 300
Sacramento, CA 95811
CH2M HILL

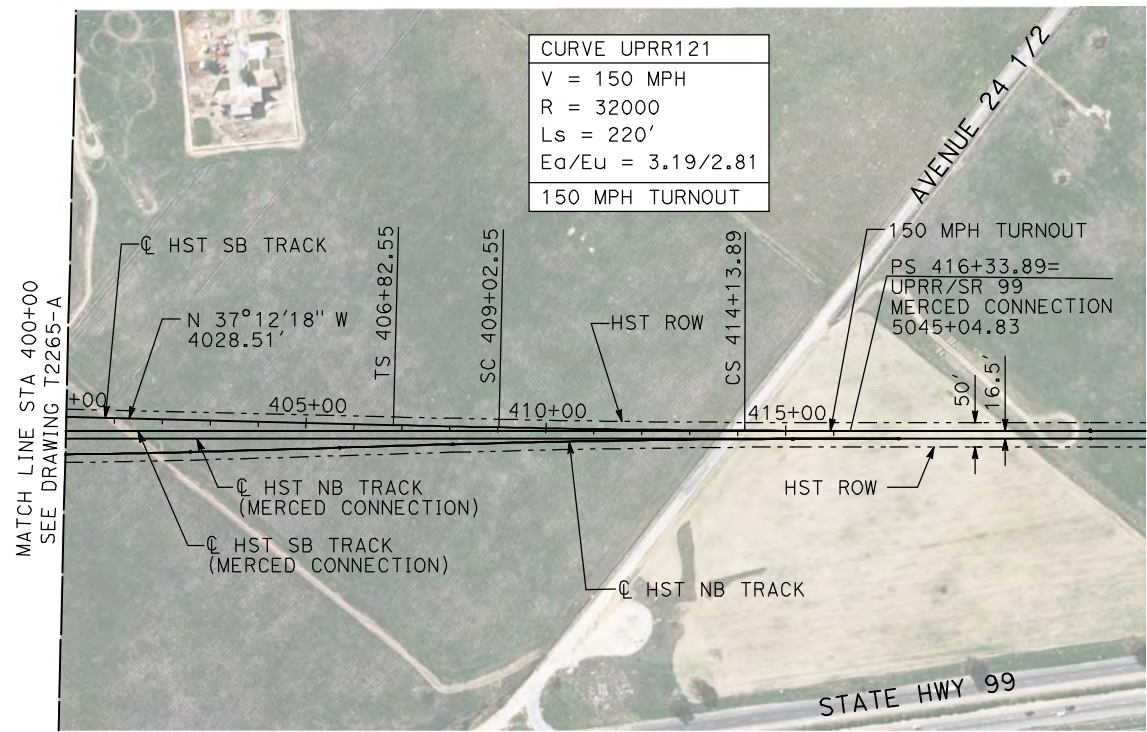


CALIFORNIA
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO**
UPRR/SR 99 WYE - SB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 345+00 TO STA 400+00

CONTRACT NO.
HSR06-007
DRAWING NO.
T2265-A
SCALE
AS SHOWN
SHEET NO.
OF

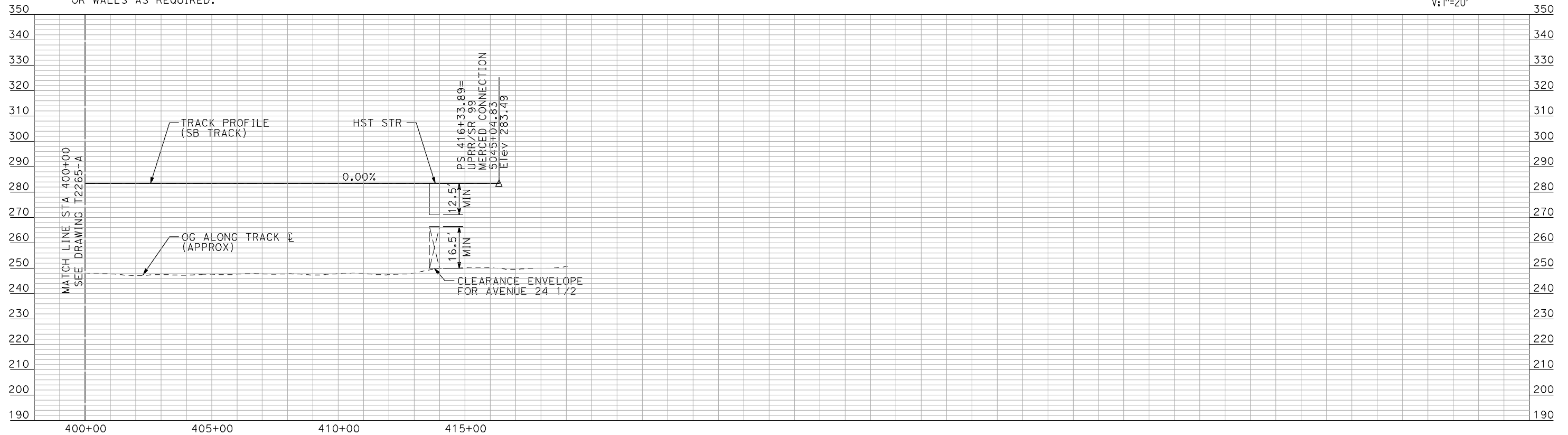
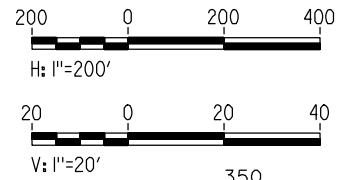
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PLAN



PROFILE

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| DESIGNED BY A. SHIELDS |
| DRAWN BY H. SULLIVAN |
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| IN CHARGE A. BOONE |
| DATE 07/20/2011 |

RECORD SET
15% DESIGN
SUBMITTAL

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CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT
MERCED TO FRESNO

UPRR/SR 99 WYE - SB CONNECTION
AVENUE 21
PLAN AND PROFILE
STA 400+00 TO STA 416+33.89

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| CONTRACT NO. HSR06-007 |
| DRAWING NO. T2266-A |
| SCALE AS SHOWN |
| SHEET NO. ### OF ### |